The Gathering Storm

The Naval War in Northern Europe September 1939–April 1940

Geirr H Haarr

Seaforth
PUBLISHING

The Gathering Storm

The Naval War in Northern Europe
September 1939–April 1940

Geirr H Haarr

Seaforth
PUBLISHING

It would seem that the eternal and sometimes elusive triangle of man, ship and ocean, particularly under the stress of war, produces the best qualities of courage and compassion, irrespective of the rights and wrongs of the conflict. In war it is inevitable that only one side can triumph but honour and self-sacrifice are not the attributes of the victors alone.

Douglas Reeman

To have anything more than entertainment value Naval maritime history must be analytical and critical. And it must, in so far as it is humanly possible, be truthful.

Naval Staff History, Vol. 1, 'Introduction'

The Gathering Storm

The Naval War in Northern Europe
September 1939–April 1940

Geirr H Haarr

Seaforth
PUBLISHING

To the memory of Stoker Albert William ‘Horse’ Goodey of HMS Havock and the others who served through these affairs

Copyright © Geirr H Haarr 2013

First published in Great Britain in 2013 by
Seaforth Publishing,
Pen & Sword Books Ltd,
47 Church Street,
Barnsley S70 2AS

www.seaforthpublishing.com

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 978 1 84832 140 3
eISBN 9781473831315

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without prior permission in writing of both the copyright owner and the above publisher.

The right of Geirr H Haarr to be identified as the author of this work has been asserted by him in accordance with the Copyright, Designs and Patents Act 1988.

Typeset and designed by JCS Publishing Services Ltd, www.jcs-publishing.co.uk
Printed and bound by CPI Antony Rowe, Great Britain

The Close-Range Gunner's Lament

The wettest bloke out on the sea
Is he who sports an AA3
And really round the bend it's true
Is the Matloe with an AA2

Now we of *Wolsey* (hallowed name)
Of E-boat Alley and Dunkirk fame
Have AA guns that sometimes work
By Hector's leave and pusser's dirk

Point-fives forebridge-all stoppage three
Forebridge, Oerlikon-Jag in stap me
Dig out all day, all guns tip-top
Rewarded with, Snap, Crackle, Pop

When we try to crash our swede
We wake up screaming: 'Faulty feed'
Plenty of Aim-off; not too much
Why don't you swap your job with Hutch?

Sometimes we fire at 'Left hand masts'
And then the Skipper starts his blasts
It's 'Left' and 'Over' hear him sing
'You're porous, HIT the bloody thing'

Just when we're 'On' the gun wraps up
So once again we're sold a pup

Written in the North Sea in 1943 by twenty-three-year-old Ordinary Seaman Peter ‘Buck’ Taylor, gunner onboard HMS *Wolsey*, a V&W destroyer.

By that time, he had been at war for almost four years, starting in HMS *Vindictive* at Narvik.

Sadly, Peter passed away in March 2013.

Contents

Acknowledgements

1 Introduction

2 The Allied Navies

3 The German Navy

4 Baltic Eagles

5 What Now?

6 German Home Waters

7 Sinking the *Athenia*

8 Contact Obtained

9 Learning the Hard Way

10 No Margin for Error

11 A/S Striking Forces

12 The Grey Wolves

13 The Bull of Scapa Flow

1 Pale Death
4
1 The Thin Grey
5 Line
1 Airwar at Sea
6
1 Commerce
7 Raiders
1 Mine Warfare
8
1 Night Stalkers
9
2 The Northern
0 Patrol
2 Winter War
1
2 No Friends
2
2 The *Altmark*
3 Incident
2 Crossroads
4
2 Storm Warning
5
2 Conclusions
6
Appendices
A Allied and

Neutral Merchant Ships Lost, 1 September 1939–8 April 1940

B Allied Naval Ships Lost, 1 September 1939–8 April 1940

C Kriegsmarine Ships Deployed in Poland

D Main Ships of the Polish Navy, September 1939

E German Destroyers and Torpedo Boats in Commission by 1939

F German Ships Intercepted by the Royal Navy, September 1939–April 1940

G U-boats Sunk, September 1939–April 1940

H German

Destroyer Mine-laying Operations, 1939 and 1940

I German Minelayers in Commission, Autumn 1939–Spring 1940

J British Minelayers in Commission, Autumn 1939–Spring 1940

K Armed Merchant Cruisers in the Royal Navy, 1939–1940

L Northern Patrol 6-inch Cruisers, 1939

M Iron Ore Shipments from Narvik, August 1939–March 1940

N Nomenclature of British Atlantic and North Sea

Convoys, 1939–1940

O Operation Wilfred Minefields on the Norwegian Coast, 8 April 1940

Abbreviations

Notes

References

Acknowledgements

MANY PEOPLE HAVE CONTRIBUTED to this book, some from a lifetime of their own research, others with a small but important detail. Their contributions are highly appreciated.

Above all, the selfless help and support from David Goodey is gratefully acknowledged. Were it not for him, this project would have been shelved a long time ago. Erling Skjold, Andrew Smith and Andrew Lambert are also thanked sincerely. Without their help and constant support nothing would have been achieved.

Albert Goodey, Peter Taylor, Roy Stevens, Dagfinn Kjeholt, Jan Reimers, Wilfred 'Robbie' Robinson, Bernhard Hallis, Derek Morris, Ronald Crocker, John Ballam and Vic Hiscock were all there when the war commenced, and a lifetime later I was privileged to listen to their thoughts and memories. Often sad, sometimes troubled, but inevitably low key and with an understatement I could not fully fathom, they spoke of the little things that are not in the reports. Many have crossed the bar since and precious few are left. Let us never forget them or their mates.

The nameless staffs of The National Archives at Kew, the Bundesarchiv in Koblenz and Freiburg, the Imperial War Museum in London and Riksarkivet in Oslo deserve thanks for patience and professional dedication. The Naval Museum in Horten and Nordland Røde Kors Krigsminnemuseum (War Museum) in Narvik are thanked for their enthusiastic support.

Horst Bredow and Peter Monte at the U-boot Archiv in Cuxhaven are warmly thanked for sharing their time and enthusiasm with me and for letting me use their files and archives.

Alf Muffett of the Royal Naval Patrol Service Museum in Lowestoft is gratefully acknowledged for friendly help and advice regarding the Little Ships. Likewise, I owe George Malcomson at the Royal Navy Submarine Museum in Gosport great thanks for repeated support and assistance.

Julian Mannering at Seaforth Publishing deserves many thanks for believing in me and giving me the deadlines I needed. Without his support the project might never have seen completion.

Ken Satterthwaite, Keith Batchelor, Peter Harrison and the others at HMS *Cossack* Association are thanked for their friendly support. I am proud to have known Ken Robinson.

Gudmundur Helgason, John Dell, Erik Ettrup, Hans Christian Bjerg, Rob Hoole, Roald Gjelsten, Atle Skarsten, Odin Leirvåg, Robert Pearson, Reinhard Hoheisel-Huxmann, Merry Swan, David Isby, Tore Eggan, Ulf Eirik Torgersen, Sonia Law, Alexander Dietzsch, Atle Wilmar, Øystein Berge, Jon Asmussen, Halvor Sperbund, Paul Sedal, Svein Aage Knudsen, Finn Nesvold, Olve Dybvig, John Weal, Stephen Dent, Øyvinf Lamo, Richard Osborne, Jostein Berglyd, Ian Thomas, Dag-Jostein Andressen, Jeremy Pond, Trond Erik Tveit, Roal Gjelsten, Tor Ødemotland, Robert Briggs, Nils Aukan, Pamela Jacobsen, Alister Williams, Alf R Jacobsen, Peter French, Jak P Mallmann Showell, Robert Gehringer, Ian Gazely and Tor Jevanord all deserve acknowledgement.

Last, but not least, thanks to my beloved wife Gro, for accepting that my passion for her is shared with that for history, listening patiently when I needed to discuss some detail and skilfully distracting me when I needed to relax.

Sola, Stavanger, July 2013
Geirr H Haarr

— 1 —
Introduction

THERE WAS NO 'PHONEY war' at sea at the start of WWII. The hostilities commenced literally within the hour of war being declared. This book describes those early events at sea as they are remembered through the accounts of those that were actually there.

The accounts of the men who went to war is challenging material. Inevitably written sometime after the events, hours, days or years, room is made for the individual or his superiors to add, interpret or omit events. Many of the documents contain corrections or comments that could have been made by the author, his superiors, staff members or readers, not always obviously distinguishable from the first-hand accounts.

Most individuals saw little beyond their own decks and had limited knowledge of what was actually happening. Quite often, accounts from different persons present at the same event describe quite different experiences, giving contradictory information, resulting in more questions than answers. The confusion of combat and lost sense of time often resulted in accounts from otherwise level-headed individuals that, when compared to others also at the scene, gives an interesting insight into the nature of war itself. There are also direct errors in some of the reports, typically in names of persons, places or ships, but also in relative position and results of their own fire. In a few cases, there are also what appear to be deliberate over-statements or manipulations, probably intended to increase the apparent importance of the effort of the author or his comrades.

Nevertheless, I have found scores of individual stories from which, together with the formal reports and memoirs, paints a picture of the war at

sea in the first seven months of the war. There is lots of tedium, routines and boredom, but also heroism, self-sacrifice and fear. Both sides faced ‘the cruel sea’. The winter of 1939–40 was appalling and, often, the ocean was a worse enemy than the men from the other side.

The research material has come in many languages: English, German, Norwegian, Swedish, Danish, Polish and French. All translations into English are my own responsibility and, where necessary, I have striven to maintain the significance of what was said or written rather than give a word-for-word translation. For documents written in English, the quotations have been kept as much as possible as the original, except for a few minor changes to improve the readability. The account is mainly based on primary sources, where possible combining official and private material to achieve the best insight. In some cases, secondary sources have been used after a thorough assessment of their credibility.

In compiling the manuscript, I have attempted to make a balanced account from each side, each theatre of war and each type of ship involved. The amount of detail available makes it impossible to cover everything, and faults, mistakes or misinterpretations are inevitable. Hence, anyone who has corrections, comments or alternative information that might lead to modifications or improvement of the account is encouraged to contact me, either directly or through the publisher.

— 2 —
The Allied Navies

Scant Resources

In 1919 the Royal Navy could muster 438,000 men, 58 capital ships, 12 aircraft carriers, 103 cruisers, 456 destroyers and 122 submarines. Great Britain was the unchallenged master of the seas. Economic and social reforms were necessary, though, and reduced military spending was inevitable. Arguments that sustaining an armaments industry would help maintain employment and stimulate new industries were dismissed. The British politicians had no choice but to follow a course that would lead to a dramatic development for the armed forces. The army was cut to little more than an imperial police force. The Royal Navy and the newly established Royal Air Force fared relatively better but still faced dramatic cutbacks. The Royal Navy would fall to almost insignificance within ten years. One by one, the shipbuilding and ordnance companies collapsed or merged to preserve a minimum of employment and competence. First Sea Lord Admiral Beatty was shocked and stubbornly continued to plan for a renewal of the fleet, including battleships and carriers, arguing that the strategic needs of the empire could only be met by naval superiority.[1] This was not to be.

The Washington Naval Treaty signed on 1 February 1922 allowed the Royal Navy to retain twenty-two capital ships, most of them of the 25,750-ton, 15-inch gun *Queen Elizabeth-class*, with the notable exception of *Hood*, which floated a substantial 41,200 tons. In the ‘Special Programme of Naval Construction’ of 1923 that gave the priorities for the remainder of

the decade, some of the retained capital ships were listed for upgrading while four were scrapped, allowing for the building of two new ones – *Nelson* and *Rodney*. To remain below 35,000 tons while keeping their 16-inch guns, all three triple turrets were positioned forward, with the after hull trimmed short. The day of the capital ship was nearly over, though, and within two decades, the aircraft carrier would replace the capital ships as the ultimate naval weapon, supported by simpler, less expensive warships and submarines.

By the early 1930s, the Royal Navy had shrunk to two main fleets, the Home Fleet and the Mediterranean Fleet. Cruiser squadrons were maintained at the West Indies, North America, Cape, East Indies and China stations. Later still, economic constraints led to some of these being replaced by sloops and other smaller ships performing 'cruiser tasks'. In 1939, the Home Fleet was still a significant force but of mixed vintage and inadequately balanced for full tactical efficiency. In addition to the battleships *Rodney, Nelson, Ramillies, Royal Oak* and *Royal Sovereign*, the battlecruisers *Hood, Renown* and *Repulse* were under command, as were the aircraft carriers *Ark Royal* and *Furious*, twelve cruisers, seventeen destroyers and sixteen submarines in addition to minesweepers and support ships. An additional two cruisers and nine destroyers were stationed in the Humber. The battleships *Revenge* and *Resolution* with the carriers *Hermes* and *Courageous*, three A/A cruisers and nine destroyers were deployed at Portland, in addition to destroyers and light forces in Harwich, Dover, Portsmouth, Plymouth and Milford Haven.[2]

Battlecruiser *Renown* was originally commissioned in September 1916. By 1939, she had effectively been reconstructed. Among the improvements were high-pressure boilers and Parson-geared turbines, upgraded 15-inch gun turrets and completely new 4.5-inch dualpurpose secondary gun armament. She could do just over 30 knots but became very wet forward if she did. (Wright and Logan – W&L)

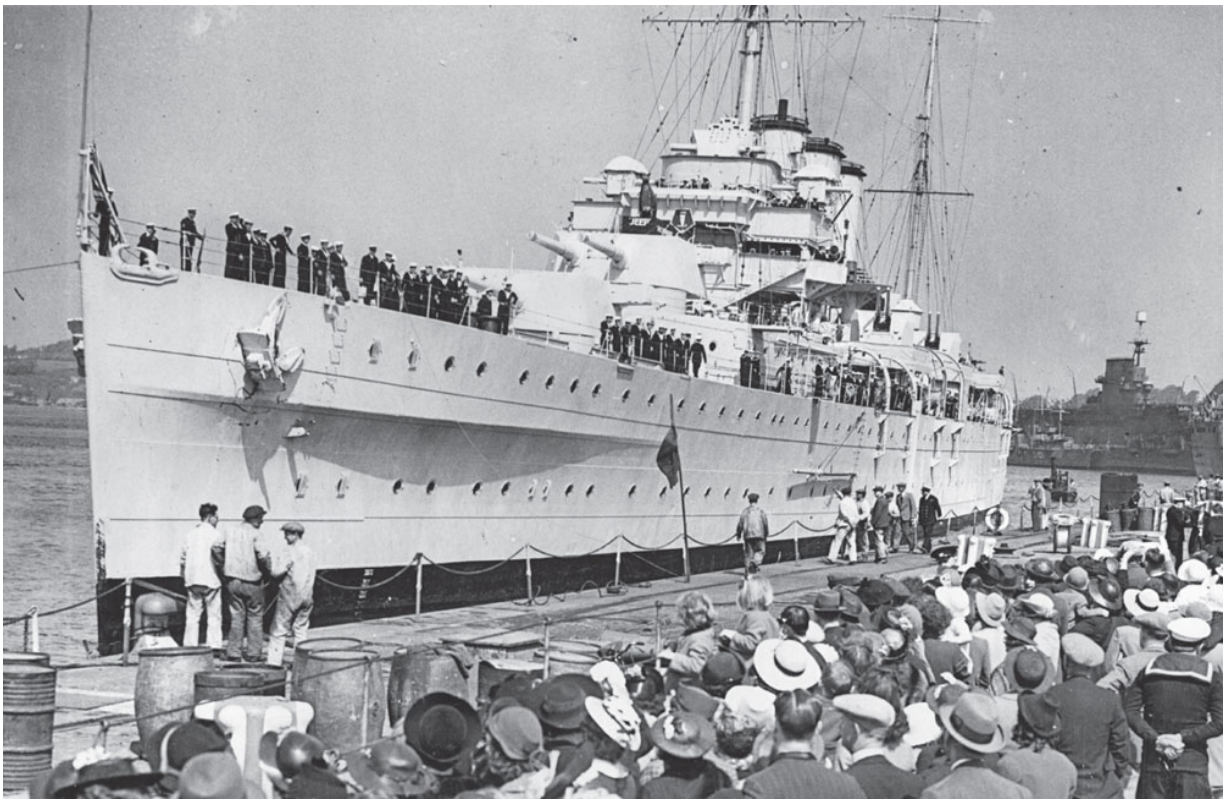
Ramillies, Royal Sovereign, Royal Oak and *Repulse* lacked modernisation and, although they would be dangerous to most opponents in terms of guns, they were so slow that for all practical purposes they were useless. Only *Hood* and the modernised *Renown* were fast enough to catch the German 'pocket' battleships, and both would be a match for *Scharnhorst* and *Gneisenau* in an equal fight.[3] *Hood*, the pride of the fleet, was ageing and due for extensive upgrades and modernisation in September 1939 – which she would never have. *Nelson* and *Rodney* were still relatively modern with powerful main guns and armour, but very slow. The lack of speed in the British capital ships meant that to catch the German battleships they would have to rely on surprise or damage by torpedoes from submarines, destroyers or aircraft – even more difficult as the German capital ships had efficient radars installed.

At the end of WWI, the Royal Navy had some forty modern cruisers in commission and a further nine under construction. Most of these were small, with 6-inch guns, suitable for the North Sea and the Mediterranean. For the protection of Atlantic and Asian trade routes, larger ships were needed. The Washington Treaty allowed for 10,000 tons and 8-inch guns, so eleven County-class cruisers were ordered in 1924–26.[4] These were seaworthy ships and could maintain speed in rough seas, being stable gun platforms with a good rate of fire and a superior director system. To stay within the limitations, a top speed of 32 knots had to be accepted, and the ships were vulnerable to bombing throughout their careers, due to reduced armour. Several of them would play important roles in the early years of WWII.

Shortage of funds forced simplifications and in 1928 *York* was launched, followed by the modified *Exeter* a year later. These were some 8,000 tons, carrying three twin 8-inch gun turrets. Further reductions were needed, and 6-inch guns became the hallmark of British cruiser design in the 1930s. Although it was half the weight of an 8-inch shell, it was argued

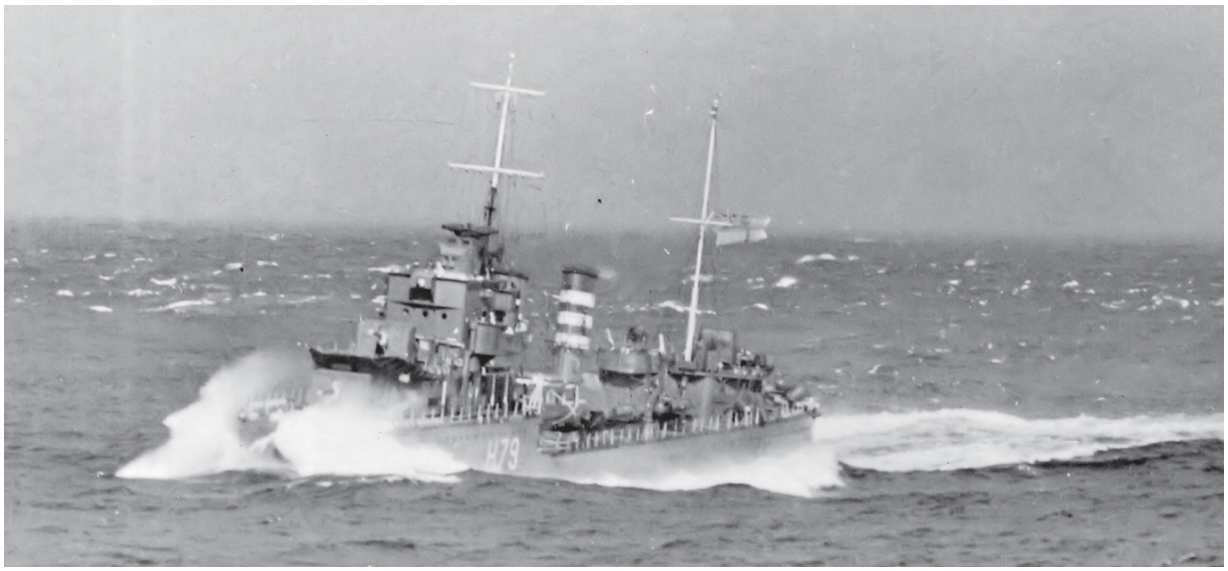
that the rapid rate of fire of the 6-inch guns would give a superior weight of broadside if it could shorten the range fast enough to avoid lethal damage from longrange heavier guns.

Five *Leander*-class,[5] three *Arethusa*-class[6] and eight *Southampton*-class[7] cruisers were launched between 1931 and 1937. The *Leanders* were some 7,200 tons with eight 6-inch guns, while the *Arethusas* carried six 6-inch guns at 5,250 tons. The *Southamptons* carried a formidable twelve 6-inch guns in four three-gun turrets, but this required a displacement of over 9,000 tons. In 1938 the even larger *Belfast* and *Edinburgh* were launched but these would not be operational until after the outbreak of war. At the start of the war, the Royal Navy had fifty-seven cruisers in commission, of which thirty-seven were modern designs.[8]



Cruiser *Norfolk*, 24 May 1939, at Devonport. The County-class cruisers were 10,000-ton ships with eight 8-inch guns in twin mounts. (Keystone)

The successful V&W-class and their modifications constituted the mainstay of the Royal Navy destroyer force in the 1920s. New ships were needed, however, and after extensive testing – including prototypes – the Admiralty settled for a new design during 1927–28. Funds were made available and the building of almost eighty fast, agile and seaworthy destroyers commenced. Running through nine batches, these were known as the A- to I-classes, produced, with minor modifications, at a rate of eight per year, with a flotilla leader for each group. The leaders were larger, somewhat better equipped and most of them carried a fifth gun amidships. Building usually took less than a year from the laying down of the the keel to launch. Fitting out took another year, but as the crews were normally transferred from one of the older destroyers in for refit or being paid off, commissioning and working up was smooth.



Destroyer *Firedrake* showing off in high seas. She was one of the 1,400-ton F-class destroyers, built in 1934 and commissioned in May 1935. Armament consisted of four 4.7-inch Mk IX guns in single mounts and eight 0.5-inch Vickers machine guns in quad mounts in addition to eight torpedo tubes (in quad mounts) and one rack for twenty depth-charges. Maximum speed exceeded 35 knots. (Crown Copyright)

Three single-reduction steam turbines provided 42,000 horsepower to two shafts. Endurance was 3,400 miles at 15 knots, or 5,340 miles at 12.5 knots. The early ships carried 4-inch guns while the later versions were upgraded with 4.7-inch guns. The elevated forecastle and bridge well aft gave the nimble ships good sea-keeping abilities. Efficient fire control was ensured by a 10-foot base rangefinder and the new 'Destroyer Director Control Tower' (DCT). Anti-aircraft (A/A) defences were insufficient, though: initally only two quadruple 0.5-inch machine guns abreast the bridge and some 0.303 Lewis guns. Two quadruple torpedo mountings for 21-inch torpedoes were standard for the early ships, while quintuple mountings were introduced for the later classes.[9] In 1934 *Esk* and *Empress* were completed as minelayers and used for testing. In spite of increased vibrations and some stability issues, the concept was found acceptable. Ships of the subsequent G-, H- and I-classes were designed for, but not fitted out with, minelaying capacity.

The building of 'super-destroyers' in other navies made the Admiralty worry over the relative inferiority of the standard British destroyer, and in the late 1930s the Tribal-class was developed. Arguably an unnecessary concept, the Tribals were formidable warships and among the finest-looking vessels the Royal Navy ever possessed. With even better sea-keeping qualities than the smaller destroyers and armed with four twin 4.7-inch turrets, they would be a match for many light cruisers, all the more so as power ramming of the ammunition meant that a high rate of fire could be kept up in rough seas.[10] The 4.7-inch guns had a maximum elevation of only 40 degrees, however, and with insufficient A/A armament, one four-barrel pompom and two quadruple machine guns they would suffer heavily when exposed to the dive-bombers of the Luftwaffe. Still, the Tribals, of which the first, *Cossack*, was commissioned in June 1938, would have an outstanding war record.

In 1936, the Board of the Admiralty, after discussions with fleet officers, decided there was a justifiable requirement for a destroyer, smaller than the Tribal-class, but still armed with a 4.7-inch twin-mounting high-angle/low-angle (HA/LA) gun, two torpedo mountings and minesweeping gear.[11] The result was the highly successful J-, K- and N-classes of, in all, twenty-four ships. The first two flotilla leaders, *Jervis* and *Kelly*, were completed in May and August 1939, respectively. By the end of 1939, all sixteen J- and K-class destroyers were in service. As with the Tribals, the A/A armament was inadequate and had to be upgraded once the war commenced.[12]

Sloop *Dundee* was launched in 1932. She was torpedoed and sunk in September 1940 by *U48*, which was at the time under the command of Kapitänleutnant Heinrich Bleichrodt (see Chapter 12). (Author's collection)

The myriad of auxiliaries, minesweepers and other small vessels that had been commissioned during WWI were largely put in the reserve, sold or scrapped. The most modern ships were kept, meaning that newbuilds were not even considered before the late 1920s, by which time financial constraints applied. By 1926–27, fourteen vessels of a 'sloop' type were included in the building programme for the years 1927–30. In spite of their classification, they were essentially multi-purpose minesweepers equipped for escort and patrol duties and anti-submarine (A/S) work. As usual, when trying to put too many functions on one keel, none worked very well. Too slow for A/S work, too large for efficient mine-sweeping and too weakly armed for patrol duties, the ships were nevertheless complicated in design and needed time and resources to build. From minor differences, they were known as *Bridgewater-, Hastings*- and Shoreham-classes. The subsequent *Grimsby*- and *Halcyon-classes* were simpler, but not necessarily more suitable for wartime service. By 1936, eight *Grimsby*s and eighteen *Halcyon*s had been built. Later, the *Bridgewater*s, *Hastings*, *Shorehams* and *Grimsby*s were reclassified as patrol sloops and even later as escort vessels, while the *Halcyon*s became minesweepers. All forty vessels were first and foremost minesweepers, though.[13]

From 1936 to 1938 the Naval Staff construction programmes were chiefly concerned with larger vessels – destroyers and above. As war did not appear imminent, the focus was on traditional larger ships, tying up large amounts of resources. There would, it was expected, be sufficient time to fill in the gaps with smaller ships later, should tension increase. When Parliament cut the navy estimates in 1938, the decision was made to maintain cruiser and capital ship programmes and push the smaller ships even further into the future. Instead, arrangements were made for some 200 trawlers to be made ready for rapid conversion to auxiliaries, should necessity dictate. In addition, specifications were prepared whereby further auxiliary minesweepers of trawler design could be built at regular shipyards

should the need arise. In early 1939, the first of these ‘Admiralty trawlers’ were ordered. Pending their completion, twenty-six commercial trawlers were bought and put into the yards for conversion. Fifteen of these were ready for service on 3 September 1939.[14]

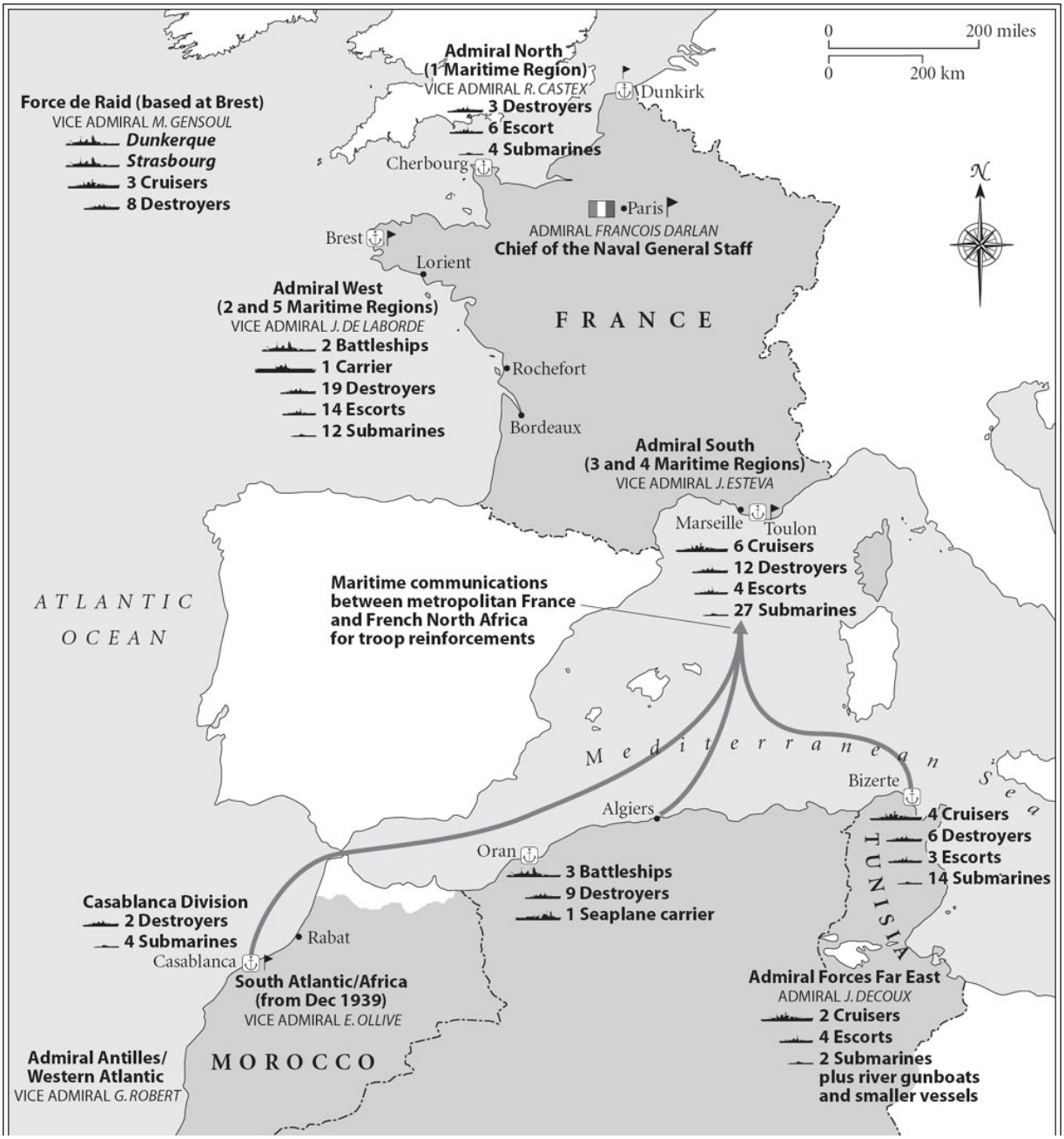
Limited in relative and absolute strength, the Royal Navy of the early 1930s was no longer the battle-hardened senior service of Admiral Beatty that had watched the German Hochsee Flotte sail into internment.[15] The military historian Correlli Barnett argues that ‘once again a kind of fashionable yacht-club more apt for elegant displays of ship-handling and royal tours of the Empire than for battle’ had emerged.[16] In a meeting of the Committee on Defence Programmes, held on 20 March 1939, there seems to have been contentment with the 200 or more ships under construction and no immediate urgency to accelerate the building programme in a systematic manner. ‘A little of everything’ seemed to be the solution, in spite of the meeting admitting to the ‘completely inadequate number of A/S escorts [and] minesweepers’.[17]

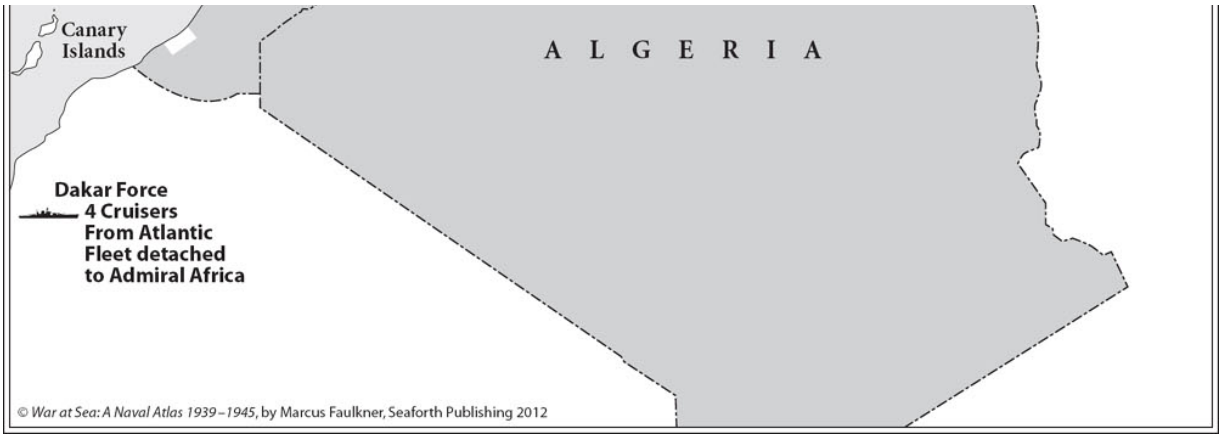
In all fairness, a good number of the officers and sailors strove to maintain the quality of the old navy, but peacetime routines and a return to a Victorian-style social divide between the decks created challenges. Neither the Admiralty nor the naval educational institutions were devoting much time to systematically gathering, analysing and applying the lessons of WWI into the development of new and modified strategies, tactics or doctrines for the next conflict. An alarming number of deficiencies would be brought along into the opening stages of WWII and cost many lives.

Marine Nationale

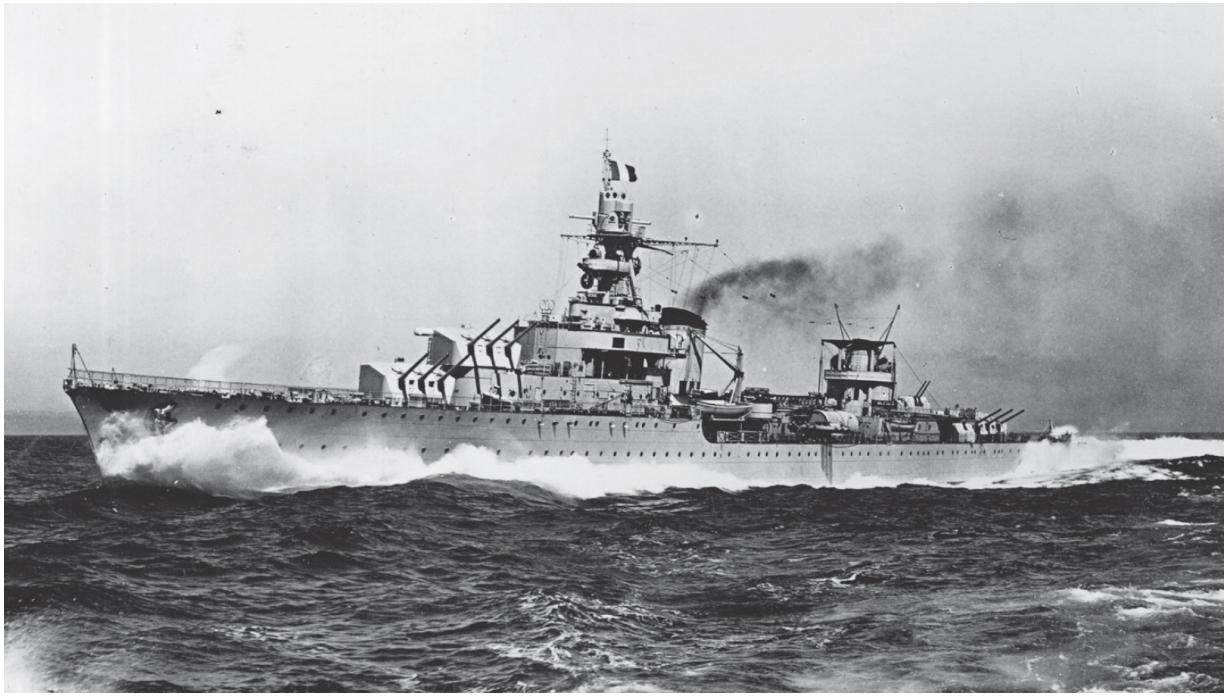
The French Navy or Marine Nationale of the late 1930s was steeped in tradition, conservative in utilisation of new technologies and limited in individual opportunities. Still, it was large and modern, 200 ships being commissioned between 1920 and 1935, averaging around thirty thousand

tons per year. After the collapse of the disarmament talks during the mid-1930s, the building accelerated even more. Except for five renovated capital ships, the oldest ship of the Marine Nationale was seventeen years old in 1939. At the outbreak of WWII the Marine Nationale was the fourth largest navy in the world, and in Europe it was second only to the Royal Navy. It could muster about 160,000 men and was far better prepared for war than either the French Army or the French Air Force.[18]





For most French naval officers, WWI had been spent escorting convoys to and from the colonies and lying in wait for the Austro-Hungarian fleet that never emerged from its anchorages. Little had come out of the alliance with Britain, and animosity towards the Royal Navy existed well into the 1930s. Students at the Naval Academy (École de Guerre Navale) learned that the Marine Nationale's main task was to uphold and defend the ports and coastlines of France and its colonies and to protect the merchant routes. Unless absolute surprise and numerical dominance could be achieved, the fleet should not be deployed aggressively. The Washington Naval Treaty was seen as favouring Britain, the USA and Japan while curbing France and Italy, and its restrictions were taken lightly. The 1935 Anglo-German Naval Agreement underpinned the belief that Britain was hostile to France and the other Latin countries. The strategies and mentalities of the French Navy were not primed for cooperation with the Royal Navy.[19]



The 6,000-ton French cruiser *Emile Bertin*, which was commissioned in 1935. Her main armament consisted of three triple 15-cm turrets and she was reasonably well equipped with A/A guns. (Author's collection)

Vice-Amiral François Darlan, who took over as Chief of Staff on 1 January 1937, had a grudge against Britain in general and the Royal Navy in particular. Shy and reserved behind a brusque exterior, he was known for improvising frequently and not acting on advice. In June 1939, he was made Amiral de la Flotte, a rank created especially for him, and given command of the entire French Navy, including direct control of all operations in all theatres. As he was answerable directly to the government, it made him independent of general political support and to a large extent free from political control.

There is no doubt that Darlan and most of his senior officers believed the Marine Nationale could match even the combined German and Italian navies if put to the test, without the support of the Royal Navy. Hence, there was virtually no exchange of plans or points of view between the Admiralty and the French Naval Staff prior to the outbreak of war, largely due to common mistrust and an absence of mentors advocating the need for a common strategy. Joint Anglo-French naval staff conferences were held in London on 31 March, 27 April and 3 May 1939, but these had little influence on the practicalities in either navy. On 23 August, the French naval reservists were called, all leave cancelled and men ordered to report back to their ships immediately. Plans for liaison with the Royal Navy were activated and French naval officers were sent to Malta, Gibraltar, Plymouth and Dover while similar British contingents arrived in Bizerte, Toulon, Brest and Dunkirk, in addition to large naval missions in London and Paris, respectively. On the 25th, a common signal code, prepared in utmost secrecy, was activated. Still, the cooperation between the Marine Nationale and the Royal Navy would never prosper, and by the summer of 1940 Admiral Darlan's inability to develop a proper cooperation with the British virtually sidelined the Marine Nationale.[20]

Starting to Rearm

In their annual review for 1933, the British Chiefs of Staff wrote: ‘Germany is not only starting to rearm, but she will continue this process until within a few years hence she will have to be reckoned as a formidable military power.’ The Baldwin cabinet responded by establishing a Defence Policy and Requirements Sub-Committee (DRC) under the Committee of Imperial Defence (CID) to assess ways of meeting the worst defence deficiencies and re-establishing a military force adequate for the situation.[21] Later, a new ministerial appointment for the coordination of defence was also made to focus the efforts inside the cabinet.[22]

The possibility of a three-sided conflict with Germany in Europe, Italy in the Mediterranean and Japan in the Far East emerged during the early 1930s, and the motivation of the Admiralty for the Anglo-German Naval Treaty of 1935 was the wish to keep German naval rearmament at a qualitative level where it could be matched by the existing Home Fleet. By allowing the Kriegsmarine to aim for a ‘balanced fleet’, the treaty meant that Germany would have to spread its resources and build many types of ships rather than focusing on those most dangerous for Britain.

The Royal Navy was not the service that was in the worst state, but the situation was sinister. Capital ships were largely obsolete and even if light cruisers, destroyers and submarines were relatively modern, their numbers were insufficient. In July 1934, the cabinet approved a modest five-year programme to try to mend some of the deficiencies of the naval forces. A prioritised modernisation of battleships and cruisers commenced, but the refits would take time and the ships undergoing the upgrading would be out of commission for years. It was February 1936 before political agreement for a factual expansion programme of the armed forces was reached and an accelerated warship-building programme initiated. From £53.5 million in 1933, the naval budget increased to £127.2 million in 1938. A significant part of this had to be used for upgrades and modernisations, though, and only a slow increase in building could be envisaged. As a stopgap measure,

some of the older capital ships were taken to the yards for modernisation: *Warspite, Renown* and *Malaya* first. Armament, armour, fire-control systems and machinery were prioritised, together with A/A and torpedo protection. The ships were virtually rebuilt and the process took years. Still, they were back in commission before the war. *Valiant* and *Queen Elizabeth* were not, and further upgrades, including that of *Hood*, were cancelled. The County-class cruisers were also upgraded before the war with additional armour and A/A armament.

Unexpectedly, the lack of shipyards, skilled labour and a high-tech naval industry turned out to be a major challenge, creating a growing dependence on foreign deliveries. High-quality steel was in such short supply that some of the new cruisers and carriers had to use Czechoslovak armour. Likewise, Swedish Bofors and Swiss Oerlikon A/A guns had to be imported as such weapons could not be manufactured in Britain. Most serious was the fact that an inferior fire-control system for the A/A guns was chosen, largely due to incompetence and inability of British engineering firms to manufacture the precision instruments needed in the superior systems.

Nevertheless, construction of new ships commenced, and it was projected that at the end of 1940 the Royal Navy would have 15 capital ships, 8 carriers, 70 cruisers, some 145 destroyers and 55 submarines. As things turned out, however, the newbuilds would largely replace the losses inflicted by the war, rather than increase the fleet.[23]

During the late 1930s, discussions within the Royal Navy arose as to where the main wartime anchorage for the Home Fleet should be: Rosyth or Scapa Flow. Many preferred the former, not least due to its less remote location. Eventually, during mid-1938, a decision was made in favour of the Orkneys, and during the Czech crisis in September 1938 the Home Fleet was assembled at Scapa Flow for the first time since 1919. It became instantly obvious that the anchorage was inadequately equipped and

protected, vulnerable to both submarine and aircraft attacks. Hence, Loch Ewe, Clyde and Rosyth had to be used as well until adequate defences had been installed at Scapa Flow. This would take time, though, due to lack of priority and funds, and actual improvements at Scapa Flow between the Munich summit and the outbreak of the war were limited.[24]

In April 1938 Admiral Roger Backhouse was appointed First Sea Lord, and Admiral Charles Forbes took his place as C-in-C of the Home Fleet. Forbes (aged fifty-eight) was an experienced sailor, both in the staff role and on the bridge, who strongly disliked publicity. His flag lieutenant from his later days in command, Godfrey Style, described him as 'always calm, always the same, and *always* correctly dressed'.[25] In another subordinate's view, he had 'a fine brain and a tremendously powerful character'.[26]

Backhouse died less than a year after becoming First Sea Lord, and his successor was Admiral Alfred Dudley Pound (aged sixty-two), recalled from his post as C-in-C of the Mediterranean Fleet in June 1939. Pound was a very experienced admiral indeed, but by many was considered 'rugged and undistinguished, solidly middle-class … with a mind untroubled by large strategic visions'.[27] Not always good at detailing tasks to subordinates – or if he did, at trusting their assessments – Pound was to carry a heavy burden through the first part of the war. His capacity for work endeared him to Churchill and, after a rather cold start, a very special relationship developed between the two men. They were truly different in character, temper and competence but with an aligned belief in the Royal Navy as the senior service. Between Forbes and Pound, though, an unconstructive personal relationship developed that was to affect the Home Fleet's operations in the first period of the war. Unlike the War Office and the Air Ministry, the Admiralty was an operational centre, and information was often available to the First Sea Lord before it reached the commanding officers at sea. This gave him an opportunity to interfere, which Pound often could not resist, to Forbes' intense dislike.[28]

The Naval Staff met daily to review the previous twenty-four hours, consider reports and decide matters on which immediate action was necessary. In mid-1939, the deputy chief of the Naval Staff (DCNS) was Rear Admiral Tom Phillips. The Second Sea Lord, Admiral Charles Little, was responsible for all matters concerning personnel, while the Third Sea Lord or Controller, Rear Admiral Bruce Fraser, oversaw design and construction of warships, including machinery, weapons and equipment. Fourth Sea Lord Rear Admiral Geoffrey Arbuthnot dealt with the procurement and distribution of stores and supplies, including fuel, and Fifth Sea Lord, Vice Admiral Alexander Ramsay – replaced by Vice Admiral Guy Royle in November 1939 – was responsible for all aspects of naval aviation.[29]

Defence of the Fleet

During WWI, the Royal Naval Air Service (RNAS) developed from very small beginnings to a major service in its own right. Still, the navy to a large degree supported the establishment of an independent Royal Air Force (RAF) in 1918, accepting the argument that a single force would optimise aircraft and engine development and ensure effective operational control. An agreement was reached whereby the Royal Navy would operate the ships, while the RAF would provide the aircraft and the men to fly and service them, onboard or ashore. Maritime aviation was quickly sidelined within the RAF, however, creating a detrimental conflict between the Admiralty and the Air Ministry.

When Admiral Alfred Chatfield became First Sea Lord in 1933, he carried with him experience from the Mediterranean, where the carriers *Glorious, Furious* and *Eagle* had been part of his command. He lobbied extensively for an independent naval air force, arguing that such sophisticated services as operating and flying aircraft at sea needed dedicated involvement. Eventually, he was heard, and in 1937 the Fleet Air

Arm (FAA) was moved from RAF to Admiralty control as a branch of the Royal Navy. Sulking, the RAF developed tactics to deal with the threat to seaborne trade at the source, bombing shipyards and naval bases, eliminating the need for a specialised anti-shipping strike force. Occasional bombing trials against maritime targets were considered satisfactory and only a limited number of reconnaissance and flying-boat squadrons were necessary for escort, anti-submarine patrols and reconnaissance. Long-distance navigation over the sea was brushed over, and few if any British aircrews had any training in this by September 1939.[30]

In spite of the addition of a Fifth Sea Lord as Chief of the Naval Air Services to the Board of the Admiralty, the FAA was in a rather sorry state as war approached. Experience in the tactical use of carrier-based aircraft was limited, both in the Royal Navy and in the FAA itself, all the more so as the approximately 200 carrier-aircraft were largely obsolete – Swordfish, Skua, Roc and Sea Gladiators.[31] Budgetary reasons must take a fair share of the blame for this, but traditionalist British naval officers also held that aircraft would never be a danger to capital ships at sea and were unwilling to spend resources on their development.

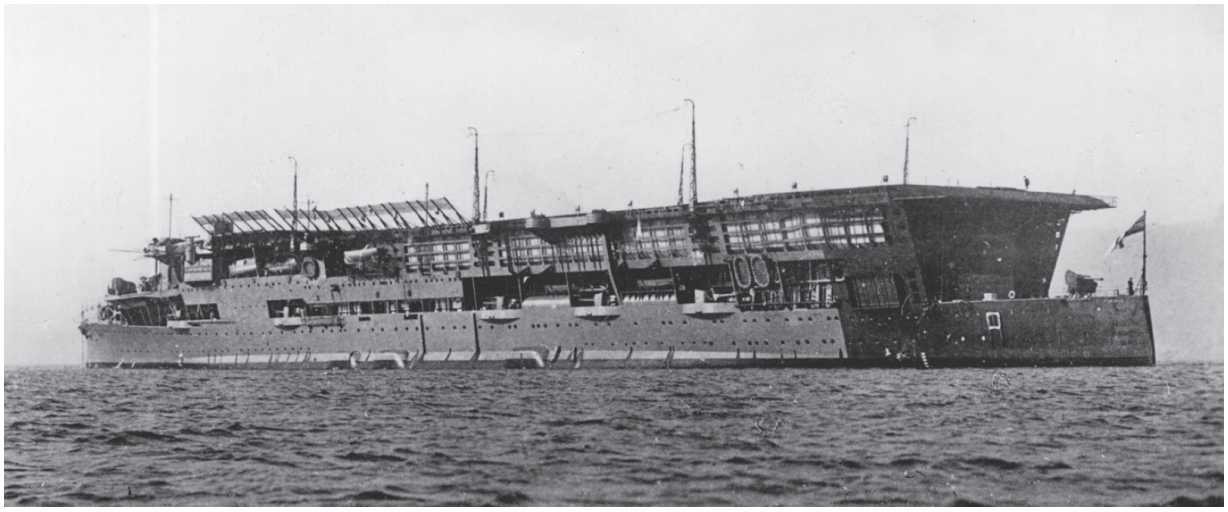
Contrary to the tactics developed during the later Norwegian campaign, where carrier task forces operated without capital ships, in the mid-1930s the British carriers were seen as scouts for the fleet, with defence of its own ships and attacking those of the enemy as secondary tasks. The offensive role, using bombs and torpedoes, was not ignored, but it was felt that this should only be considered under favourable conditions and then mainly to slow down enemy ships so that they could be brought to action. This concept of carrier deployment would dominate British naval thinking between the wars, leading to the building of heavily armoured carriers that would take fewer aircraft and preventing a dynamic development of their strategic and tactical deployment. By 1939, the doctrine had been modified

somewhat, but reconnaissance and shadowing were still considered the primary roles for the FAA.

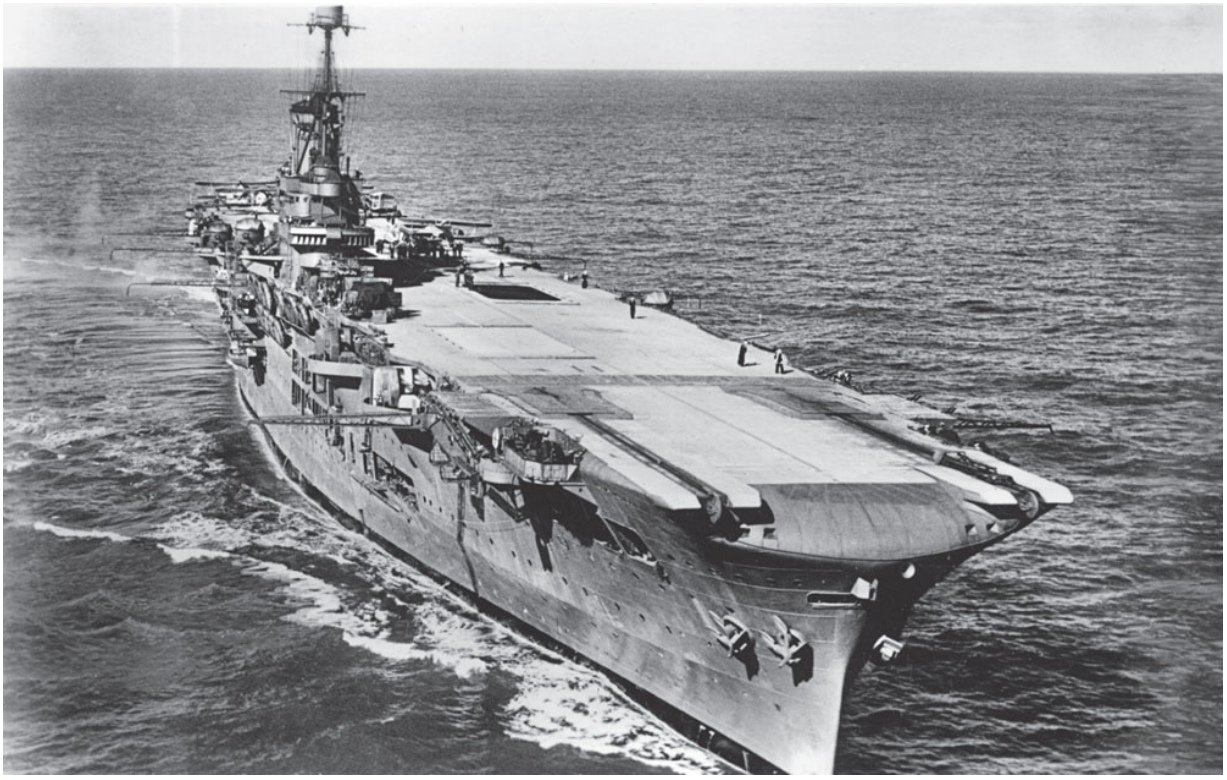
A few years after WWI, three carriers remained in service with the Royal Navy: *Furious, Argus* and *Vindictive*, in addition to the seaplane carrier *Pegasus*. Of these, only *Argus* had a through deck. *Vindictive* was reconverted to a cruiser in 1923, while *Furious* was rebuilt and upgraded, emerging as a flush-decked fleet carrier with two hangars and lifts capable of operating up to sixty-one aircraft. *Hermes*, the first Royal Navy carrier built from scratch, was no more than 11,000 tons. She was intended as a scout assisting the fleet's cruisers and carried only twenty-five aircraft. *Eagle* had twice the displacement but barely any more aircraft.[32] *Courageous* and *Glorious*, originally completed as 'large light cruisers', had hull sizes and speeds rendering them suitable for adaptation to carriers, and conversion work was started in 1923. When completed in 1928 and 1930, respectively, they could operate some thirty-five aircraft each and were satisfactory stopgap vessels.[33]

When *Ark Royal* was completed in November 1938, several novel ideas were introduced, including arrester cables and compressed steam catapults, making limited deck space available for arming, fuelling and flight preparation.[34] The keel length was limited to 670 feet by dry-dock capacity in Gibraltar and Malta, but the flight deck was extended to 800 feet, with a pronounced overhang over bow and stern. As the two hangar decks were within the hull, the flight deck rose to some 65 feet above the waterline, giving the *Ark* a characteristic towering profile, unlike any other ship at the time. To save weight, welding was used where possible, while armour plating was limited to the belt, engine rooms and magazines.[35] For the same reason, the flight deck was not armoured, making the ship vulnerable to air attack, but increasing stability and operational endurance. Six boilers powered three turbines, one to each propeller, giving a maximum speed of over 31 knots – a necessity to operate safely and efficiently during flight

operations without slowing down the fleet she was meant to accompany. A/A armament was limited, but the *Ark* was not meant to be alone. A screen of destroyers and cruisers would always be near, while she could concentrate on operating aircraft. That the companions had limited A/A capacity themselves was overlooked. With a theoretical capacity of seventy-two aircraft, *Ark Royal* rarely operated more than fifty aircraft in the beginning of the war, reflecting the lack of aircraft and pilots. Normally, during these times, two squadrons of Fairey Swordfish biplane reconnaissance torpedo bombers and two of Blackburn Skua dive-bombers were on board, the latter also taking on the interceptor and defensive fighter role.[36]



Aircraft carrier *Furious*. (Sellicks)



Aircraft carrier *Ark Royal*. (Valentines)

In 1939, *Ark Royal* entered service alongside *Hermes, Eagle, Courageous* and *Glorious*, while *Furious* and *Argus* were used for training purposes. *Furious* was recalled to active service shortly after the outbreak of war, while *Argus* remained in a training role.[37] Six new, fully armoured, 23,000-ton carriers of the *Illustrious*- and *Implacable-classes* had been laid down from 1937 but none of these would be operational until the end of 1940.

* * *

On 26 August 1939, Admiral Forbes took *Nelson* and the rest of the Home Fleet from Scapa Flow to patrol the Shetland–Bergen narrows. With four capital ships, one carrier, two cruisers and ten destroyers, it was but a fraction of the fleets Jellicoe and Beatty had commanded, but it would have to do. On 29 August, the order went out for a general mobilisation in Britain and at 16:38 the Admiralty issued a signal to all British Naval units to mobilise for 'war with a European power'. Two days later, on the 31st, Admiral Forbes ordered his ships to: 'complete fusing of all shells. Ship all warheads. Prepare for war.'[38]

— 3 —
The German Navy

The Admiral's Navy

In addition to Germany losing land and colonies and having to pay immense reparations to the Allies, the Treaty of Versailles reduced Germany's military forces to a minimum after WWI. Conscription was abolished and the new voluntary German armed forces was to be no more than 100,000 men, 'devoted exclusively to the maintenance of order within its territory and control of its frontiers'. No aircraft, tanks or submarines were allowed. The General Staff and all similar organisations were dissolved and military schools shut down. The navy was reduced to eight 11-inch *pre-Dreadnought* capital ships, eight obsolete cruisers, twenty-four destroyers and torpedo boats, thirty-eight minesweepers and a handful of other smaller vessels.[1]

In January 1921, all naval conditions of the Versailles Treaty had been met, and the German Imperial Navy was history. To try to heal the wounds and restore morale, the highly decorated Admiral Paul Behncke, who had led the Third Battle Squadron at Jutland, was recalled from retirement and appointed Commander-in-Chief. There was no lack of volunteers to fill the positions in the new Reichsmarine and it was not uncommon to choose between thirty to forty highly qualified applicants for each position. Some of these talents were put to active use in developing technologies that would get round the restrictions of the Versailles Treaty. Limitations in gun size were sought to be overcome through rockets and quick-firing guns; radar was developed, as were new welding techniques, diesel engines were tested

and so on. In parallel, a substantial modernisation of the German merchant fleet and the early start of construction of replacement ships ensured that the specialist workforce in the yards remained active, maintaining their skills through the crisis.[2]

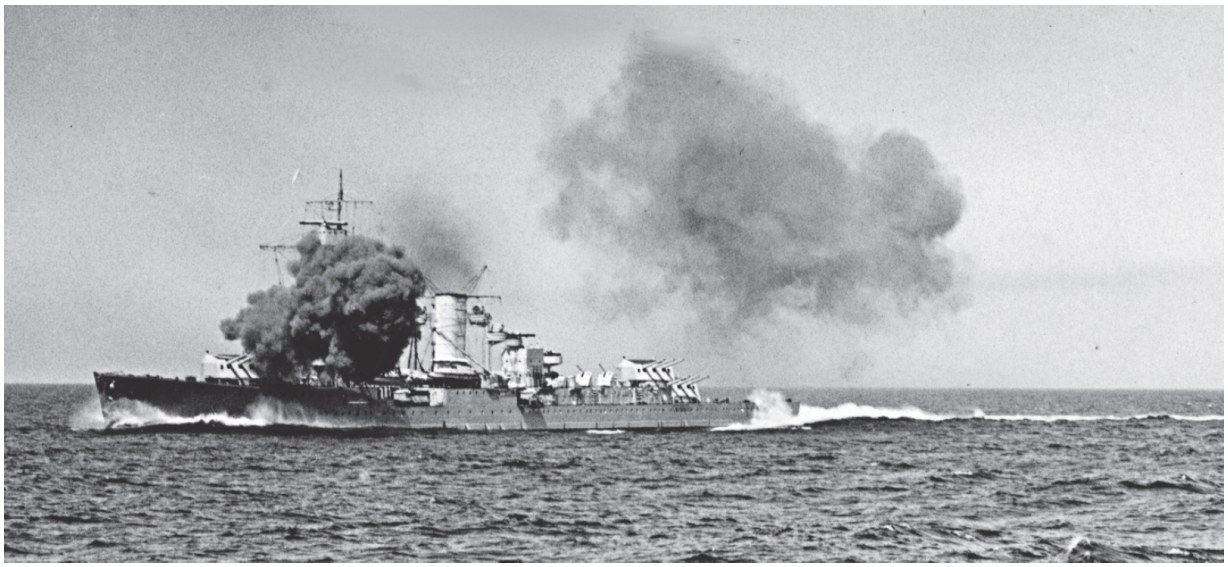
To help him reinstate discipline and self-respect in his men, Admiral Behncke called Konteradmiral Erich Raeder and tasked him with reorganising the officer corps as inspector of naval education.[3] Like the rest of the German officer corps, Raeder was irked by the terms of the Versailles Treaty, but had no option but to adhere to them officially while waiting for better times. Meanwhile, he circumvented the abolition of staff colleges by making his own ‘course for assistants to commanding officers’ based on private notes and files, gradually expanding it from two weeks to a full eighteen months. Simultaneously, he sought to achieve a closer relationship between the line officers and the branch officers, while specialist training for petty officers and enlisted men created confidence and loyalty in the ranks. All involvement in party politics was banned and several of the ways and customs of the Imperial Navy were reintroduced, particularly those that could underpin the pride of the navy and its place in society. By 1924, Behncke retired, considering he had achieved what he had been asked to do, passing command of the Reichsmarine to Admiral Hans Zenker.

In 1927, the light cruiser *Emden* entered service as the first new-build ship after the war. She was robust and functional, but a top speed of 29.5 knots and single 15-cm guns in shielded mountings made her obsolete from the day of her launch. The Design Office used the definition of standard displacement in the Washington Treaty, announcing her as displacing 5,400 tons empty, some 600 tons less than allowed. In fact, she exceeded 6,950 tons, well over the limit of the Versailles Treaty. The Allied Control Commission failed to appreciate this and, once played, the trick was further exploited in all future designs until altogether ignored. The ambiguity between tons and long tons was also used to the full.[4]

Admiral Erich Raeder was made Chef der Marineleitung in October 1928 and would remain C-in-C of the German Navy for fourteen years. (Author's collection)

The three K-class cruisers laid down in 1926 were radically new designs compared to *Emden*. Building was quick; *Karlsruhe* and *Königsberg* were launched in 1927 and *Köln* in 1928. Completion was delayed, though, largely for financial reasons, and the cruisers were commissioned between February 1929 and January 1930. Displacing 6,650 tons standard, they were an undeniable breach of the Versailles Treaty. These ships were a major step for the Reichsmarine, with 15-cm guns mounted in three triple turrets; 68,000-horsepower diesel engines gave them a comfortable 32.5 knots in calm seas, but an inherent structural weakness of the hull and lack of rigidity compromised stability in heavy seas, hampering operational efficiency in spite of extensive alterations. A further two modified K-design cruisers, *Leipzig* and *Nürnberg*, followed, similarly armed but with the same weaknesses, restricting their use.

In parallel with cruiser design, the building of a modern destroyer force was initiated through the six ships of the Type 23 or Raubvogel-class.[5] The first, *Möwe*, was launched in March 1926. Destroyers were, according to the Versailles Treaty, capped at a maximum of 800 tons, but it soon became clear that an effective warship could not be designed within this constraint. The *Raubvogels* displaced 924 tons standard and a full 1,290 tons loaded. Armed with three 10.5-cm guns, six torpedo tubes and capable of a fair 34 knots, they were primarily designed for torpedo attacks but also equipped for mine-laying and coastal escort duties. Six subsequent ships of the slightly larger and faster Type 24 or *Raubtier*-class were commissioned between October 1928 and August 1929.[6] All these vessels were later reclassified as torpedo boats – *Torpedoboote* Type 23/24. Initially painted black like the torpedo boats of the Kaiserliche Marine, they became a common sight in the Baltic and the German Bight, testing tactics and new operational concepts, often together with the K-class cruisers, giving valuable experience to men and officers. True destroyers would not be available for several years.



The 6,650-ton light cruiser *Karlsruhe* carried 15-cm guns mounted in three triple turrets. Her 68,000 horsepower diesel engines gave her a comfortable 32.5 knots in calm seas, but, like her sister ships, she was unstable in heavy seas. (Author’s collection)

On the battleship side, the first replacement was possible in 1922, and planning started in 1921. Designing an efficient fighting vessel with 28-cm guns within the 10,000-ton displacement limit created endless problems, and one concept after another was rejected. Admiral Zenker kept the pressure on the design teams, though, and in the spring of 1927, they eventually presented a workable plan for a 10,000-ton ship with six 28-cm guns, high endurance and capable of 26 knots The Reichstag voted the first building credit in early 1928, against considerable political opposition, and the keel of *Deutschland* was laid down in February 1929. Meanwhile, a high-level conspiracy was uncovered, involving the unauthorised use of military funds. Admiral Zenker was forced to resign and Raeder was called to Berlin to become Chef der Marineleitung on 1 October 1928. He would remain C-in-C of the German Navy for an unprecedented fourteen years.

At the time of Raeder's appointment, several clandestine projects existed, including a Submarine Development Bureau set up in 1922 in Holland, disguised as a Dutch shipbuilding firm funded by the German shipbuilding industry.[7] In addition, a core of would-be officers and engineers was kept active and up to date on key naval tactics and technologies, camouflaged as civil servants and academics. Raeder changed none of this. Instead, towards the end of 1929, he addressed senior officers, telling them that he remained convinced of the vital importance of the North Sea to Germany and that there would be a role for the German Navy on the high seas. Greatly encouraged, his officers began to prepare for a future very different from that of coastal defence envisaged ten years earlier.

Panzerschiff Deutschland carrying out stability tests in Wilhelmshaven 1935. (Author's collection)

In the midst of the crippling economic crisis, *Deutschland* was launched on 19 May 1931. The launch was watched by 60,000 spectators, including Reichspresident Paul von Hindenburg in his full imperial field marshal uniform, flanked by Raeder and other naval and civilian dignitaries. *Deutschland* was the first German ship to carry triple turrets and aircraft catapults but, above all, she was the first capital ship in any navy with solely diesel propulsion: four engines per shaft. A new phase for the German Navy was emerging.

The Third Reich

On 30 January 1933, Hitler took his seat as chancellor for a right-wing coalition government in Berlin. His followers celebrated with torches and large parades all over the country. The Weimar Republic was dead and things would never be the same.

Admiral Raeder met with his new head of state for the first time on 2 February, when Hitler addressed senior officers of the navy and army during a dinner.[8] In a two-hour speech, Hitler announced that he was about to embark on a massive rearmament programme that would reunite the nation and end the unemployment crisis. In a subsequent private meeting some weeks later, Raeder was assured that there would be no war with Britain, Italy or Japan. The build-up of the Kriegsmarine would have to be scaled within the framework of a 'German continental policy' so as not to provoke Britain, and a professional relationship should be sought with the Royal Navy.

Raeder appears to have struck a friendly note with Hitler at first. Both men were too private and reserved for any kind of friendship, but it seems that in the early years the Führer was willing to listen to Raeder and to a large degree accept his advice in naval matters. Arguably not a cynical National Socialist like many of the others in the senior officer corps, Raeder nevertheless used the powers of the Nazi regime to the utmost for his navy,

realising that he could not have one without the other. Nevertheless, he was largely able to keep the navy out of the politics of the Reich, focusing on naval matters. Most probably he believed – or at least hoped – that the sharp edges of the new regime would wear off with time.[9]

In August 1934, the ageing President Hindenburg died. The war hero was given a pomp-filled state funeral in the best of German traditions. Just before the ceremony, Hitler declared himself president in addition to chancellor, combining the two offices of state with full dictatorial powers. A few days later, all officers of the Wehrmacht were paraded and directed to pledge an oath of allegiance to Hitler in person.

On 2 November 1934, Raeder was told by Hitler that it was of vital importance that the German Navy should be increased as planned, as no war could be carried out if the navy was not able to safeguard the ore imports from Scandinavia. As a start, Raeder suggested that six submarines that had already been partly prefabricated abroad should be brought back to Germany for assembly. Hitler hesitated but eventually approved, and from February 1935, fifteen years after Germany was supposed to have been militarily restrained forever, preparations for submarine construction were taking place behind heavily guarded gates at the Deutsche Werke in Kiel.

In a public speech on Heroes' Memorial Day, 16 March 1935, Hitler announced the Versailles Treaty annulled and declared the resumption of Germany's rights as a sovereign power. Compulsory conscription and military service for all young men was reintroduced and the rebuilding of the German armed forces commenced officially. Two months later, the Reichsmarine was ominously renamed the Kriegsmarine, leaving little doubt that the rearmament had but one purpose.[10] A few weeks later still, the German Air Force, Luftwaffe, came into official existence under the personal command of Hermann Göring.[11]

In May 1935, British Foreign Secretary John Simon and his deputy, Under-Secretary of State Anthony Eden, travelled to Berlin to meet Hitler,

on his invitation. To their surprise, they were told that Germany was now equal to Britain in air strength, and Germany claimed the right to build a naval force equal to 35 per cent of the Royal Navy's tonnage in all classes.[12] The British government, after consulting with the Admiralty, decided this was a relatively moderate demand. Accepting the German demand would, in its opinion, prevent another arms race and become an acceptable basis for stability – all the more so as it would make Germany build conventional capital ships rather than continue developing new ship types for which the Royal Navy was not prepared. Consequently, Joachim von Ribbentrop, Hitler's foreign affairs adviser and special envoy to London, was invited to the Foreign Office on 4 June for further discussions and, after some fine-tuning of the wording, the Anglo-German Naval Treaty was signed on 18 June 1935.[13] At a stroke, Germany had secured international sanction to build large surface ships and submarines:

Battleships:	8 totalling 187,000 tons
Heavy Cruisers:	5 totalling 50,000 tons
Light Cruisers:	10 totalling 66,000 tons
Aircraft Carriers:	3 totalling 45,000 tons
Destroyers:	38 totalling 52,000 tons
Submarines:	44 totalling 18,100 tons.[14]

The allowance for submarines, ignoring the fact that Germany had already started building them, was 45 per cent of the British fleet, which could be extended to parity, provided due notification was given with appropriate opportunity for discussion. The higher ratio for submarines was based on the Royal Navy having relatively few, around fifty-five, at the time. That they were offensive weapons had not been forgotten, but it appears that the British negotiators considered the number of submarines in question small in absolute numbers and manageable with the technology at hand.

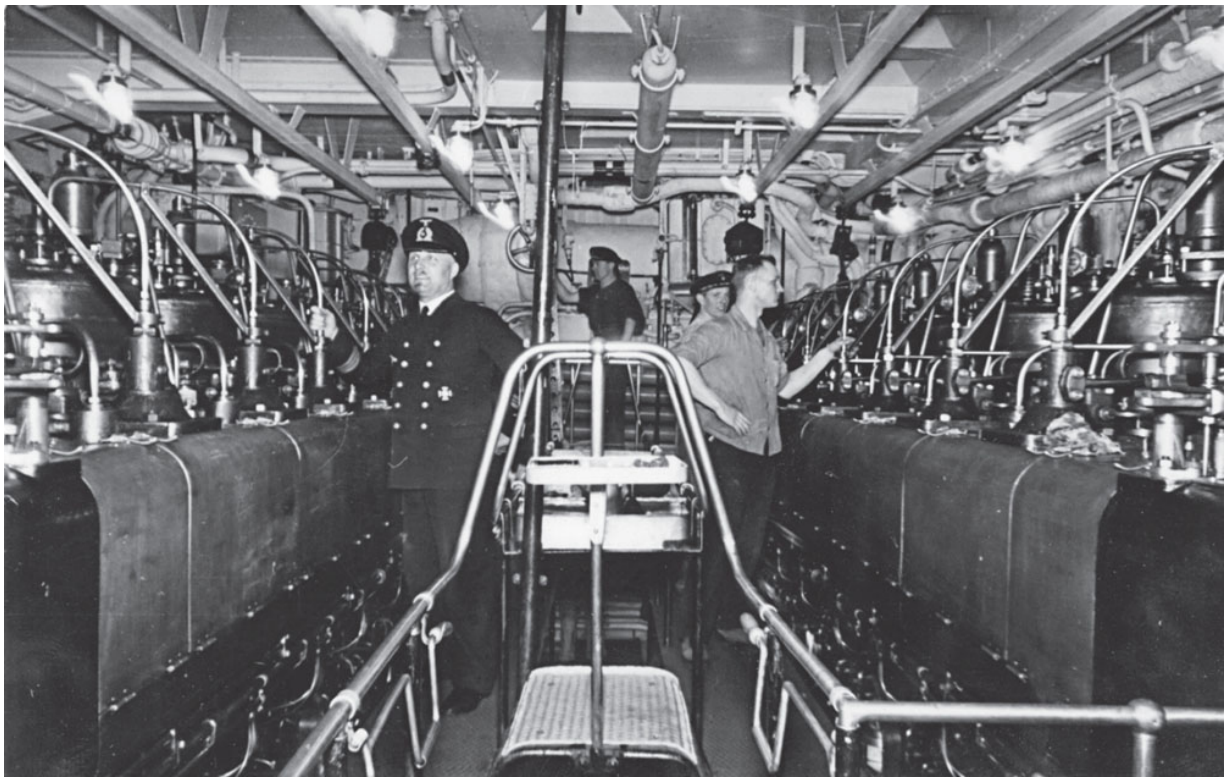
‘The happiest day of my life,’ Hitler rejoiced when the message came through that the treaty had been ratified in London.[15] His understanding of naval strategy was limited and he did not at all see that the limited resourses intended for the Kriegsmarine had now been locked in a manner that suited the Royal Navy. It appears that Hitler saw the treaty as a political agreement, ensuring that there would be no war with Britain in the short term, rather than as a technical agreement on weapons systems and tonnage.

Raeder saw the treaty as the end of the dishonour inflicted on Germany at Versailles. In his mind, it was proof of Hitler’s sincerity when he claimed that he had nothing but peaceful intentions towards Britain. Some years later he wrote: ‘The Führer hoped until the last moment to be able to put off the threatening conflict with England until 1944–45. At that time, the navy would have had available a fleet with a strong submarine superiority, and a much more favourable ratio in most other types of ships, particularly those designed for warfare on the High Seas.’ In his memoirs after the war, he modified this to state that up until the outbreak of the war, ‘the Naval Treaty [with Britain] in 1935 made the basis for all efforts and deliberations within the Kriegsmarine. An armed conflict with England was not taken into consideration.’ Trying to achieve too much too fast once the shackles were off, however, made research, testing and development suffer. This would backfire on the Kriegsmarine when the war started and several of the ships and their advanced tackle were continually plagued by inherent technical problems and flawed construction.[16]

The Kriegsmarine – Built for War

Deutschland was commissioned on 1 April 1933, less than three months into Hitler’s chancellery. She was classified by the Kriegsmarine as a *Panzerschiff* or ‘armoured cruiser’ and easily recognisable with her compact, low silhouette. Officially within the 10,000-ton limit, *Deutschland* was actually close to 15,000 tons when loaded. It was intended she should

outgun all faster ships and outrun all with larger guns, but a maximum speed of only 28 knots would make the latter somewhat of a challenge, even if few Allied capital ships in commission at the time could actually catch her. The British Admiralty looked at *Deutschland* with concern, but she was far from the fierce warship she was conceived to be. Fast but not really fast enough, with unreliable engines and poor performance in heavy seas, she and her sisters never achieved what was expected in the Atlantic. Up to seven similar ships were originally planned, and the future *Admiral Scheer*, which had been approved by the Reichstag in May 1931, was launched on the day of *Deutschland*'s commissioning. The third ship, *Admiral Graf Spee*, had been laid down six months earlier and construction was well under way at Wilhelmshaven. Otherwise similar to *Deutschland*, the two 'Admirals' had some differences in superstructure design, carried more armour and were somewhat heavier.[17]



The diesel engine room of *Graf Spee*. (Author's collection)

Rather than building further *Deutschland*s, Raeder decided proper capital ships were needed and sent the engineers of the Design Office back to the drawing board. Redesign took time, though, and only in May and June of 1935 were the keels of battleships *Gneisenau* and *Scharnhorst* laid down at Deutsche Werft in Kiel and Kriegsmarine-Werft in Wilhelmshaven, respectively.[18] Their 35-cm gun-turrets could not be completed in time and, to avoid delays, it was decided to mount three upgraded triple 28-cm turrets as a temporary solution. Both turret types had the same base diameter and neither draught nor stability of the ships would be adversely affected through a later upgrade. After the start of the war, there was never an opportunity to take the ships out of service for refit, and they were destined to spend their careers with 28-cm turrets – over-armoured and under-gunned.[19]

Twelve 15-cm guns and fourteen 10.5-cm multi-purpose guns in twin mountings constituted the secondary armament. Sixteen 37-mm guns in twin mountings and ten 20-mm single mounted guns made up the light A/A armament. The 28- and 15-cm guns were directed by an advanced fire-control system with stereoscopic rangefinders in armoured cupolas, while a sophisticated new high-angle (HA) system with stabilised directors controlled the 10.5-cm heavy flak guns. The light flak operated individually. Diesel engines of sufficient power for the displacement in question were not available, and high-pressure steam turbines were chosen for propulsion. This would confine them to the North Atlantic without extensive tanker-support, but a range of 6,000–7,000 miles at 19 knots was still considerable.

Battleship *Gneisenau*. Her intended 35-cm guns could not be completed in time and, with her sister *Scharnhorst*, she was destined to spend the war with 28-cm turrets, over-armoured and under-gunned. (Author's collection)

Gneisenau was commissioned in May 1938, while *Scharnhorst* would take until January of the following year to be completed. During the winter of 1938–39, both were equipped with an 'Atlantic' clipper-bow after initial trials of *Gneisenau* showed the forecastle to be very wet even in moderate seas. Other than adding a superbly graceful line to both ships, this did little for the wetness of the forecastle, which continued to be a problem. Further testing of *Gneisenau* also resulted in improvements to *Scharnhorst*'s propulsion system, giving a full knot in speed advantage for the latter – 31.65 versus 30.7 knots on trials. At this stage, the ships displaced some 38,700 tons fully loaded. Both had radar installed in early 1939.[20]

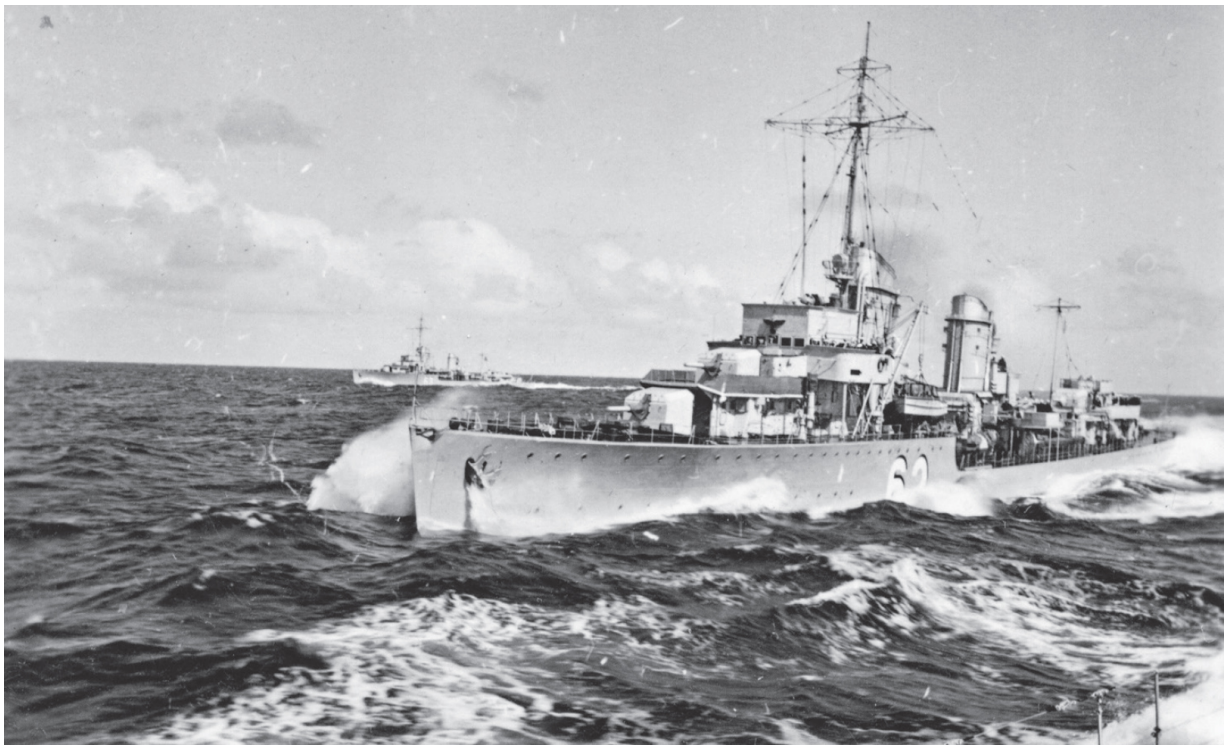
Germany's first aircraft carrier, *Graf Zeppelin*, was launched in late 1938, but the work was suspended in 1940 and Raeder was never to have a carrier.[21]

The torpedo boats commissioned in the late 1920s were inadequate for support of the growing number of capital ships and Deutsche Werke in Kiel received the contract for four destroyers in April 1934. A further twelve were contracted at other yards during the following year. These *Zerstörer*, known as Type 34 or Maass-class, were large, powerful ships, 2,200 tons standard and 3,150 tons fully loaded. The first two, *Z1 Leberecht Maass* and *Z2 Georg Thiele*, were launched on 18 August 1935. Completion took time, though, and *Z1* was not commissioned until January 1937.

Questions were soon raised over the sea-keeping qualities of the new ships – the foredeck was too short and the poor lateral flare of the forward frames was an area of alarming weakness. In spite of extensive use of light alloy, the large superstructure and heavy armament gave the *Zerstörer* a top-weight issue. Even in moderate seas, the ships were unstable, reducing their combat efficiency significantly as they had to reduce speed to avoid structural damage in heavy seas. Of particular concern was the manhandling of 26-kg 12.7-cm shells and the separate cordite cases on a badly rolling deck. The bows of *Z1* to *Z4* were rebuilt during 1938, while modifications

were made on *Z5* to *Z8* before launch. Further improvements, including a redesign of the foreship, were introduced for *Z9* to *Z16*, but their basic design remained similar to that of the first ships and little was achieved to alleviate the problems of poor sea-keeping and instability.[22]

The last of the first type, *Z16 Friedrich Eckholdt*, was commissioned in July 1938. By then, the construction of the first six of the improved Type 36 or Roeder-class ships, *Z17* to *Z22*, was well underway at the Deschimag yard, which by now stood at the forefront of *Zerstörer* construction. The new vessels had an altered bridge design and smaller funnels to reduce top weight, while the forecastle was given improved sheer through a 'Clipper' bow, lengthening it by 2 metres (6 feet). Seaworthiness was only marginally enhanced, though. The first of the Type 36 *Zerstörer, Z17 Diether von Roeder*, was commissioned in August 1938, the last, *Z22 Anton Schmitt*, three weeks after the war had commenced.[23] Improved destroyer types would be laid down in 1938, 1939 and 1940 but none of these would be operational until well after the fall of France.



Zerstörer Z11 Bernd von Arnim manoeuvring off Wesermünde with some of her sisters. These were powerful and efficient ships, but quickly lost stability and hence fighting efficiency as the seas became rough. (Author's collection)

In spite of their inferior sea-keeping abilities, the *Zerstörer* were potentially fierce adversaries, with five 12.7-cm guns in single mountings, four semi-automatic 37-mm A/A guns in twin mountings amidships and six single-mounted 20-mm guns. Two quadruple torpedo mountings and four depth-charge throwers added to the sting. Unlike most British destroyers, the German ones were equipped for mine-laying from the start. On either side, from amidships aft to the stern, rails were built into the deck on which between sixty and seventy-six mines, depending on type, could be carried without any modifications to the ships. The carrying of a full mine-load did not improve the stability of the *Zerstörer*, though, requiring reasonably benign sea conditions. None of the early German destroyers carried radar, but they had very effective passive underwater sound-receiving devices along both sides as well as active echo-sounders (S-Gerät) to detect submarines.

The main fire-control of the 12.7-cm guns was located on the bridge, above which the main 4-metre rangefinder was positioned. The secondary fire-control station was located just behind the aft funnel. The 12.7-cm shell had a maximum range of 17,400 metres (19,000 yards), and a trained crew could get away fifteen to eighteen shells per minute – in calm seas. The magazines stored only 120 rounds per gun, however, and the stocks were rapidly reduced during combat. Surprisingly, this does not seem to have worried anybody as no modifications were made.[24] The foremost 12.7-cm gun was badly affected by breaking waves, even in moderate seas, and could not be operated under adverse conditions.

High-pressure super-heated steam turbines developing 70,000 horsepower gave a maximum speed in excess of 38 knots. These plants were supposedly at the peak of German technology, but, extremely complicated and pressed into service virtually untested, they would never prove their merit. Many of the early destroyers had a notoriously poor serviceability record. On 18 November 1939, for example, of twenty-two

destroyers in commission, only five were operational. The remaining seventeen were in harbour with some defect or other, mainly engine related. Range of the *Zerstörer* was given as 4,400 miles at 19 knots, but trials showed that it was necessary to maintain 30 per cent of the fuel for ballast, due to the stability issue, which reduced the effective range considerably. At the outbreak of the war, the *Zerstörer* had been assigned to flotillas for tactical exercises but many were still undergoing trials and working up.[25]

Fast, potent small ships were an attractive alternative for the German Navy bound by restrictions and, after half a dozen test boats, the first S-boats – *S7* to *S13* – were commissioned in 1934/35.[26] These were sleek, wooden, diesel boats displacing 86 tons and armed with two torpedoes and one 20-mm machine gun aft. Development stalled for some time, but enthusiastic officers finally pushed through the approval for further boats and the slightly bigger *S18* to *S25* were commissioned between July 1938 and December 1939. These had 6,000 horsepower diesel engines, which gave them a top speed of almost 40 knots, and with good sea-keeping qualities they soon became popular with their crews. War conditions quickly showed the vulnerability of their complicated engines, though, and an inadequate practical operational radius limited their deployment. Tactical and technical improvements were made, not least by the crews themselves, and the S-boats would become one of the most potent weapons of the Kriegsmarine in coastal waters.[27]

There were extensive minefields in the North Sea and the Baltic after WWI, and thirty-eight minesweepers were retained by the Reichsmarine to take care of them. The black-painted, coal-fired sweepers worked doggedly throughout the 1920s and became a familiar sight in the ports of northern Germany. As the minefields were gradually removed, the sweepers were used for training and for testing new equipment, keeping the navy alive. Most of them had been built before or during the war, and in the early 1930s new minesweepers were needed. Orders for the first *Minensuchboote*

were placed in November 1935. To be exempt from treaty limitations, the Type 35 minesweepers were nominally less than 600 tons. In reality, they were well over 800 tons fully loaded. In spite of some stability problems, the *M-bocks* were one of the most successful designs of the Kriegsmarine. Well armed, manoeuvrable and seaworthy, they were to become dreaded adversaries in the Baltic and the Channel in the first part of the war. They were expensive and complicated to build, though, and the engines in particular needed tools and skilled personnel, which were not readily available in front-line situations.

Torpedo boat *S16*. At the outbreak of the war the Kriegsmarine had seventeen S-boats in commission and a further ten were under construction. *S16* was assigned to 2nd S-boot Flotilla based at Heligoland. (Author's collection)

M1 was commissioned in August 1938, and by April 1940 twenty Type 35 minesweepers were in commission. Two 10.5-cm guns made up the main armament, supplemented by one 37-mm cannon, two 20-mm cannons and ample depth-charges. In addition, they could carry about thirty mines each to lay minefields as well if necessary. Tactically, the *M-bocks* were intended to operate in flotillas, and most of them had additional special equipment on board, depending on their intended position or task during the sweeping operations. Cruising speed was around 18 knots. *M1* and *M2* had Voith-Schneider propulsion instead of regular rudders and propellers.[28]

In parallel, the smaller, more cost-efficient R-boats or *Räumboote* were also developed for work in shallow, coastal waters such as harbours and estuaries. These were 60–120 tons multi-purpose motorboats used for convoy escort, mine-laying, air-sea rescue and mine-sweeping. About one-quarter of the more than 400 R-boats built had Voith-Schneider propulsion, making them highly manoeuvrable. Armament was light, usually one or two 20- or 37-mm cannons. A far less successful type of ship was the so-called *Flottenbegleiter* or fleet escort vessels, of which few of the ten built (*F1–F10*) saw any amount of active service.[29]

Orders for two heavy cruisers, *Admiral Hipper* and *Blücher*, were placed in secrecy by the Kriegsmarine in October 1934. A third ship, *Prinz Eugen*, was ordered a year later.[30] Following the design specifications, *Admiral Hipper* achieved a displacement of 14,247 tons standard and 18,208 fully loaded, *Blücher* a couple of hundred tons more. In addition to the four twin 20.3-cm turrets, 10.5-cm multi-purpose guns in six stabilised twin mountings were carried. These had a sophisticated fire-control system and were efficient against aircraft as well as sea targets. The A/A armament with twelve twin-mounted 37-mm and eight single 20-mm guns were heavier than in most other contemporary ships, but the 37-mm guns were only semi-automatic. Twelve torpedo tubes, with ten reloads (twelve in

Prinz Eugen) completed the offensive armament. Three Arado Ar196 floatplanes were to be carried for the catapult.

Admiral Hipper was launched by Raeder's wife Ilse on 6 February 1937 and commissioned in April 1939. As was the case for most large Kriegsmarine ships, the forecastle was found to be very wet, even in moderate seas. During a refit in late 1939, a raked 'Atlantic' clipper bow was fitted, the bridge improved and a funnel cap added to prevent smoke invading the tower platforms. This made her a very handsome, efficient-looking ship – and very difficult to distinguish from the battleships at a distance: a problem the Royal Navy and Coastal Command would face several times.

Blücher was launched on 8 June 1937. She was extensively modified, though, based on the experiences from *Hipper*, and it would be mid-November 1939 before trials and working-up could commence. *Hipper* and *Blücher* were formidable ships on paper. In reality, the use of a high-pressure steam system resulted in frail and uneconomic machinery that would trouble them throughout their careers. *Prinz Eugen* would be better, but she would not be operational until August 1940. Arguably, the need for this type of ship in the Kriegsmarine was limited and thus a waste of resources. Merchant war in the Atlantic required larger units, capable of sustained individual operations, and the German strategy at the time did not include bases in France or Norway from where such cruisers might have operated efficiently in fast battle groups.

By the end of 1935, the German shipyards were working at maximum capacity. Lack of qualified personnel and tools, complicated procedures and the poor quality of some part-deliveries delayed the start-up of new projects. It also meant that frequent compromises were made and that in many cases unsuccessful combinations of old and new technologies were applied. The new ships needed crews, and a large-scale recruitment campaign was initiated. In particular, there was a severe need for

experienced officers and a large number of warrant officers were given rank and commission. Good for them, but awkward for the Kriegsmarine, which not only lost the backbone of its organisation, but also had to train new non-commissioned officers (NCOs) amidst an increased competition from the other services for the best candidates. As a consequence, the general standard of the Kriegsmarine fell, in spite of the best intentions. When the war broke out and a large number of auxiliaries and support ships were requisitioned, the lack of qualified and experienced officers became almost desperate.[31]

The U-boat Weapon[32]

In June 1935 the cruiser *Emden* returned to Wilhelmshaven after an extensive cruise around Africa and the Indian Ocean. With her was *Karlsruhe*, which she had met off Spain, returning from a similar cruise to the Americas. Admiral Raeder was in Wilhelmshaven to welcome the ships and after inspecting them and addressing the men, he invited Kapitän zur See Günther Lütjens of *Karlsruhe* to join him in a meeting with Fregattenkapitän Karl Dönitz onboard *Emden*. In the latter's cabin, he told the two surprised captains that they were to leave their ships immediately and move to key administrative positions contributing to the rebuilding of the German Navy.

Lütjens would, after a brief spell at the North Sea Naval Station in Wilhelmshaven, head the Officer Personnel Branch of the Navy HQ, shaping the cadre of new officers that would lead the ships and man the staffs of the Kriegsmarine. Dönitz would be tasked with reviving the still officially non-existent U-boat arm, the Unterseebootwaffe or U-bootwaffe.

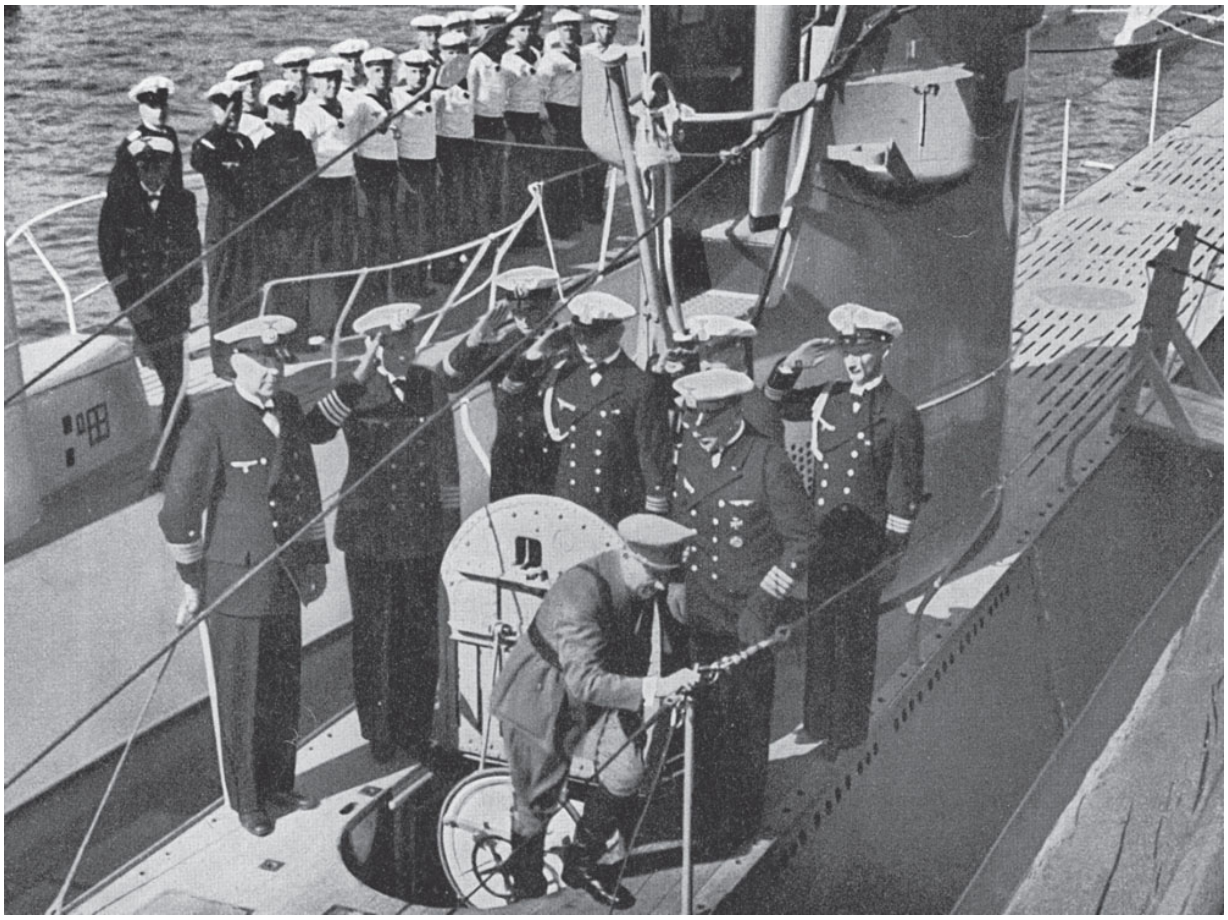
Eight years earlier, in 1927, the first training courses for the new generation of U-boat men had started. Selected ensigns at the Torpedo and Radio School in Flensburg-Mürwik had been given theoretical lectures in

U-boat operations, and in June 1933 the Anti-Submarine Warfare School (Unterseebootabwehrschule – UAW) in Kiel had been opened. In spite of its name, this was in reality a training unit for officers, NCOs and sailors to serve on board U-boats. In parallel, the training of engineering and technical personnel had also commenced. The forty-four-year-old Dönitz was now promoted to Kapitän zur See and challenged to shape these men into an efficient naval force.[33]

The first six 250-ton Type II boats, *U1* to *U6*, were commissioned in September 1935 and assigned to the U-boat school flotilla in Kiel.[34] The next batch of the improved Type IIB, *U7* to *U12*, each with a handpicked lieutenant as captain, were during the autumn of 1935 assembled in the *Weddigen* Flotilla under Dönitz's command and based at Wik, north of Kiel.[35] The flotilla, named after one of the first successful U-boat commanders of WWI, became the test-bed for Dönitz's tactical ideas, including the development of the *Wolfrudel* – wolfpack – concept: tactical groups of submarines attacking convoys or formations of warships in a coordinated manner. During early 1937, twelve further boats were added to the *Weddigen* Flotilla, half of them as spare boats so that the flotilla had a good number of boats operational in spite of repairs or maintenance. The new depot ship *Saar* was assigned to the group, as were four old torpedo boats to act as targets and to retrieve practice torpedoes.[36]

Overall command of submarine policy, development, construction and training rested firmly with Oberkommando der Kriegsmarine (OKM) in Berlin, where Konteradmiral Leopold Siemens was in charge of the U-boat division, while Dönitz focused on operations and tactics. Under his supervision the captains and crews of the *Weddigen* Flotilla went through an intensive period of drill and operational training under warlike conditions, practising emergency dives, underwater navigation and torpedo attacks – submerged in daylight and at the surface at night. Professional skill alone was not sufficient for a submarine captain to succeed, in Dönitz's opinion.

Each boat as well as the entire arm needed to possess an exceptional pride in the job and a confidence that they were better equipped and better trained than their adversaries. ‘I wanted to imbue my crews with enthusiasm and a complete faith in their arm and to instil in them a spirit of selfless readiness to serve in it,’ Dönitz wrote, adding, ‘I had to rid my crews of the ever recurring complex that the U-boat, thanks to recent developments in British antisubmarine defences, was a weapon that had been mastered.’ The British anti-submarine device Asdic was not proven technology, he held, and should be disregarded. Moving as close as possible to the target would reduce errors and prevent evasive action. In Dönitz’s view, 500–600 metres (550–650 yards) was a suitable distance, contrary to the 3,000 metres (3,300 yards) taught at the Submarine School.[37]



Hitler visiting the U-boatwaffe in Kiel August 1935. It looks as if he has been down below inspecting *U7*, which had been commissioned just two months earlier by Oberleutnant zur See Kurt Freiwald. He must have been pleased, as Freiwald was promoted to Kapitänleutnant shortly afterwards. (Author's collection, original photo taken by Heinrich Hoffmann)

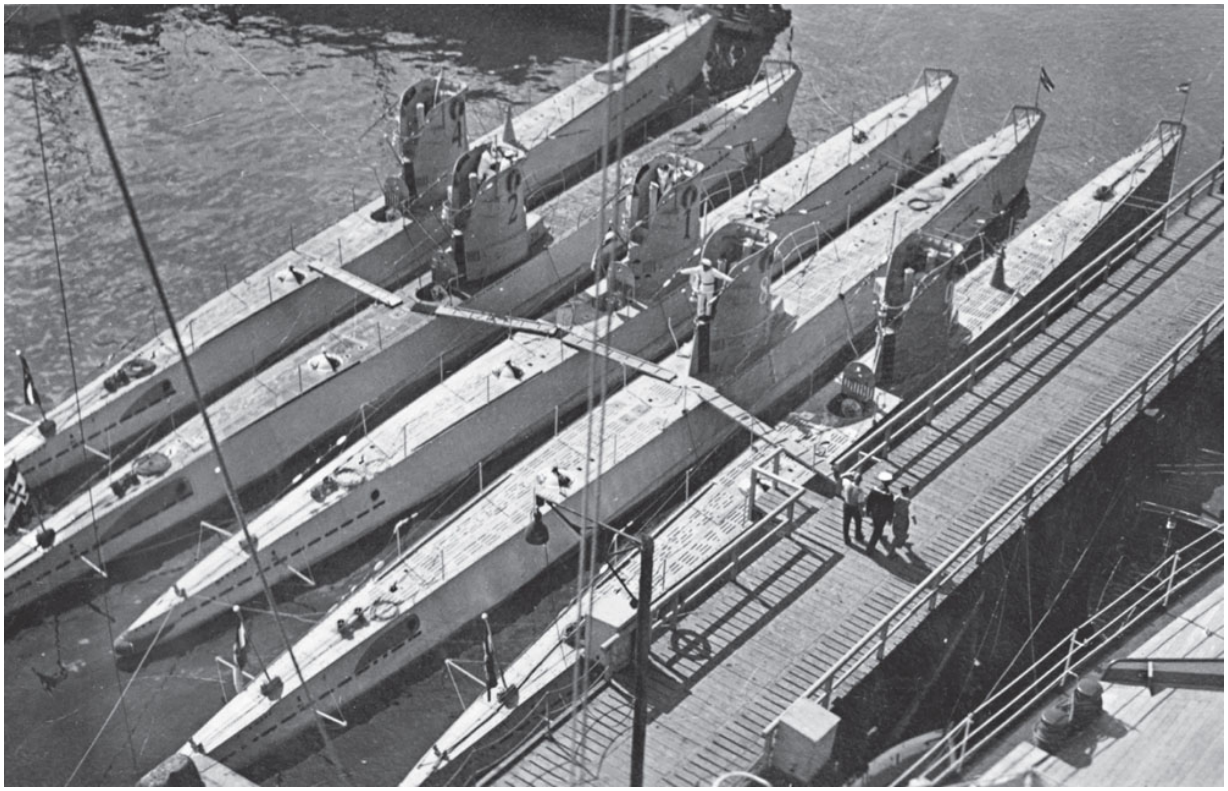
Results improved steadily and morale in the flotilla soared while Dönitz built a reputation as a forceful but fair master who knew his trade and cared for *his* boats and *his* men. He encouraged comradeship between officers and men and made an effort to go to sea with his boats as often as he could, or followed them closely from on board the *Saar*. In 1936, command of the *Weddigen* Flotilla was transferred to Kapitän Otto Loycke while Dönitz was appointed Führer der Unterseeboote (FdU) – Officer Commanding Submarines.[38]

To attack the British supply lines effectively, Dönitz argued, he needed 300 U-boats. One-third would always be at base for repair with crews resting, one-third would be in transit to or from the theatre of operations and one-third would be in action – one hundred U-boats being the minimum needed to have any chance of severing the British lines in the Atlantic. Raeder accepted this, but pending an acceptable conclusion to the discussions of what kind of boats to build, followed by a solid strategic analysis of how they should be used; he was not willing to exceed tonnage permitted under the Anglo-German Naval Treaty. Instead, he focused the resources allocated to the navy on surface ships, where there was a long way to go before the limitations were reached. By the end of 1936, a total of thirty-five U-boats were in commission. When the war broke out in September of 1939, the Kriegsmarine was still a long way from Dönitz's goal of 300 submarines.[39]

The Type I boat was one of the least successful of the German submarine constructions, and only two were built: *U25* and *U26*. Both were difficult, almost dangerous to handle, and further construction was stopped.

The Type II boats, *Einbäume* or 'dugout canoes' as they were nicknamed, were small, 250-ton coastal boats; robust, cheap and fast to build. They were uncomplicated, easy to handle and generally well liked by their crews but had a limited range and only three torpedo tubes in the bow, making them unsuitable for operations in the Atlantic.[40] As the number of

larger boats slowly grew, the *Einbäume* were largely deployed with the training units. Due to the shortage of boats in September 1939, most Type IIs had one or more active patrols during the first months of the war. By mid-1940, most of them were back at the training flotillas, though, except a few of the modified Type IIDs, which were retained in operational service.



U-boats *U4*, *U2*, *U1*, *U8* and *U9*. The former three are Type IIA and slightly smaller than *U8* and *U9*, which are Type IIBs. (Author's collection)

Submarine tender *Saar* with the *Salzwedel* Flotilla in Bremerhaven 1937. The innermost boat, *U25*, is Type IA, the others are all Type VIIA. Note that *U33* to the right is painted in a camouflage pattern, which was tested in Spain but found to be ineffective. (Author's collection)

Despite their moderate size and relatively simple construction, the 500-ton Type VIIA boats, designed in 1933–34, proved to be a robust design, capable of operations in the Atlantic – just.[41] Fast on the surface and with a potent striking power, they were well-liked by their crews in spite of the cramped interior. In particular, their ability to dive fast and go deep was cherished. There were five torpedo tubes, four in the bow and one aft. The VIIAs could carry eleven torpedoes or twenty to thirty mines at the cost of four to six torpedoes. On deck, there was a fast-firing 88-mm gun with some 200 rounds of ammunition.[42]

The modified Type VIIB, first launched in June 1936, had a substantially increased range through an additional 33 tons of fuel in external saddle tanks. Capable of some 8,700 miles at 10 knots, this was as near an ideal Atlantic submarine as practicably possible at the time. The VIIBs were slightly faster than the As, and with twin rudders had improved agility as well. Additional torpedo capacity gave a total of fourteen.[43] Many of the most famous U-boats of WWII were Type VIIB, including *U47*, *U48* and *U99*. The further improved Type VIIC would become the mainstay of the U-boat force from 1941 onwards.

The largest of the initial German U-boats was Type IX. The large hull made room for six torpedo tubes, four in the bow and two aft, and a total of twenty-two torpedoes were carried, of which ten were external and had to be taken inboard while at sea. Operational diving depth was given as 100 metres (330 feet), but several boats would later go well below 200 metres, and survive.[44]

First Blood

The Spanish Civil War offered an opportunity for the Kriegsmarine to test its new ships and U-boats under proper operational conditions. On 24 July 1936, *Deutschland* and *Admiral Scheer* set off for Spanish waters under command of Konteradmiral Rolf Carls to participate in the international

operation, bringing expatriates and refugees to safety. Within a few days, the light cruiser *Köln* followed, accompanied by the torpedo boats *Albatros, Leopard* and *Kondor*. For recognition purposes the main turrets of the ships were marked with black, white and red stripes. By October, some 15,300 refugees had been brought to safety, of which 5,539 were German nationals.[45] *Deutschland* and *Scheer* operated individually most of the time, responding to the needs reported from German or international counsellors ashore. The torpedo boats followed whichever ship was considered most in need of escort or if there was likely to be an evacuation requiring smaller ships.

In August, Britain, France, Germany and Italy signed an agreement to establish an international Non-Intervention Committee, preventing personnel, weapons and other contraband materiel reaching the warring parties by a naval force. Germany was given responsibility for the waters off a sector between Almeria and Oropesa in the Mediterranean and, unlike on land – where the Legion Condor openly sided with the rebels – the Kriegsmarine participated in joint naval operations, led by the Royal Navy. In reality, the German warships were also used to ensure the safe arrival of their own merchant ships, delivering supplies to the nationalists.[46] *Deutschland, Scheer* and *Graf Spee* would do several tours in Spanish waters on a rotational basis; each tour usually lasting from two to three months, supported by torpedo boats. Command of the German ships in Spain alternated between Konteradmirals Carls, Boehm and von Fischel. During late 1937 and 1938, Konteradmiral Wilhelm Marschall and Kapitän Otto Ciliax, to be key officers in the Kriegsmarine, were also tested out as commanders of the German naval forces in Spain.[47]

U-boats served in Spanish waters during the civil war, giving their captains and crews invaluable experience, testing equipment as well as tactics, particularly in avoiding detection by surface vessels. At least two U-boats served clandestinely on the Nationalist side. *U34* sank the Republican

submarine *C3* off Malaga in December 1936 – a flagrant breach of German neutrality hushed up to avoid political complications.[48]

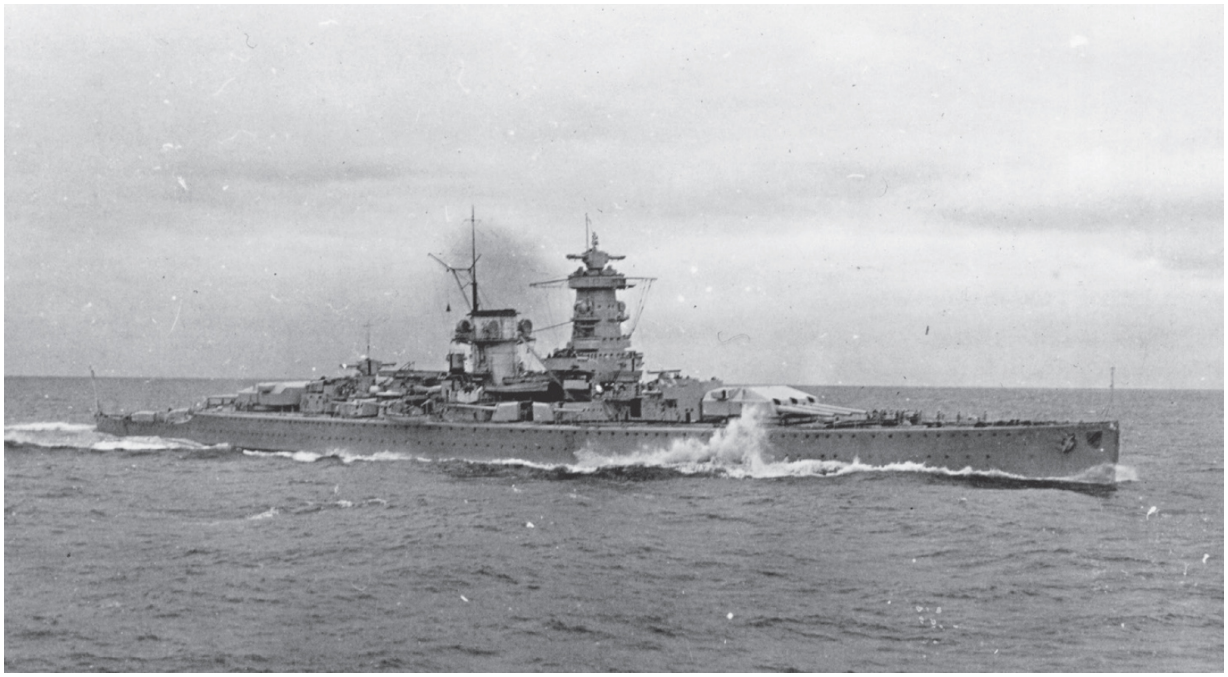
In May 1937, *Deutschland* was at Palma on the island of Mallorca, accompanied by the torpedo boat *Albatros* and two U-boats. On the 24th, Republican aircraft attacked the town and harbour installations. British and Italian ships opened fire on the aircraft, while *Deutschland* cast off, heading for the neighbouring island of Ibiza. During further attacks later in the evening, several bombs fell close to *Albatros*, and Kapitänleutnant Hans Erdmenger decided to take to sea. On 29 May, *Deutschland* came under attack again, this time while at anchor off Ibiza. There were guests on board and most of the crew had been allowed to relax on deck. In the afternoon, two light cruisers, the Republican *Libertad* and *Mendez-Nunez*, were seen approaching, accompanied by eight destroyers. They appeared to be just passing, but Kapitän Paul Fanger asked the guests to go ashore and ordered ten minutes' notice for engine and anchor-handling crews on duty. No general state of alert was sounded, though, and the A/A guns were not manned. Suddenly, two aircraft appeared, coming out of the evening sun over land.[49] Within seconds, the *Panzerschiff* was hit by two 50-kg (110-lb) bombs. The first struck the roof of No. III starboard 15-cm gun, splinters puncturing the fuel tank of the floatplane on the catapult. The leaking aviation spirit caught fire and a serious blaze ensued. The second bomb struck forward of the bridge, penetrating to the mess deck before exploding, also starting a major fire. The forward 15-cm magazine was flooded as a precaution, while the forward main turret was evacuated for over twenty minutes.

Spain, 29 May 1937. The *Panzerschiff Deutschland* was hit by two 50-kg bombs from Republican Tupolev SB-2 bombers, most likely flown by Soviet crews. The first bomb hit No. III starboard 15-cm gun. The second struck forward of the bridge, exploding on the mess deck and starting the major fire seen here. (Author's collection)

Seeing *Deutschland* under attack, four of the Republican destroyers turned towards the *Panzerschiff*, opening fire. Some of the shells landed very close and some panic ensued while 'Action Stations' was sounded.[50] Before the guns were ready, though, the destroyers turned away, checking their fire. Twenty-three sailors were dead on board *Deutschland*. A further eight died from their wounds within two weeks; 110 were wounded, seventy-four seriously with horrific burns. Kapitän Fanger headed for open sea, and after meeting with *Admiral Scheer* to take on additional medical personnel, sailed for Gibraltar. There, fifty-four of the most seriously wounded were hospitalised and the dead buried with military honours. Hitler ordered the bodies to be exhumed and brought home for a reburial at Wilhelmshaven under a full German ceremony, which he himself attended. Meanwhile, *Admiral Scheer* was ordered to bombard the Republican-held port of Almeria in revenge. This she did in the morning of 31 May, flying the old imperial German war flag. Republican shore batteries, naval buildings and ships in the harbour were pounded thoroughly, inflicting severe damage and killing nineteen people.[51]

Consolidating

When the missions off Spain ended in late 1938, the ships of the Kriegsmarine spent the remainder of the time before the outbreak of WWII on training cruises, exercises and official visits around the North Sea, Mediterranean and Atlantic. The *Panzerschiffe*, cruisers, destroyers, torpedo boats and U-boats were tested alone and together in various scenarios, attacking 'convoys' of auxiliaries in the North Sea, the Baltic and the Bay of Biscay. In a series of large-scale exercises in April and May 1939, *Gneisenau* and a number of the *Zerstörer* also participated. Tactics were developed, officers and men trained and at least some of the teething troubles of the new ships were ironed out. For some reason it seems that the Royal Navy paid very little, if any, attention to these activities.



Admiral Scheer off Spain in 1938. (Author's collection)

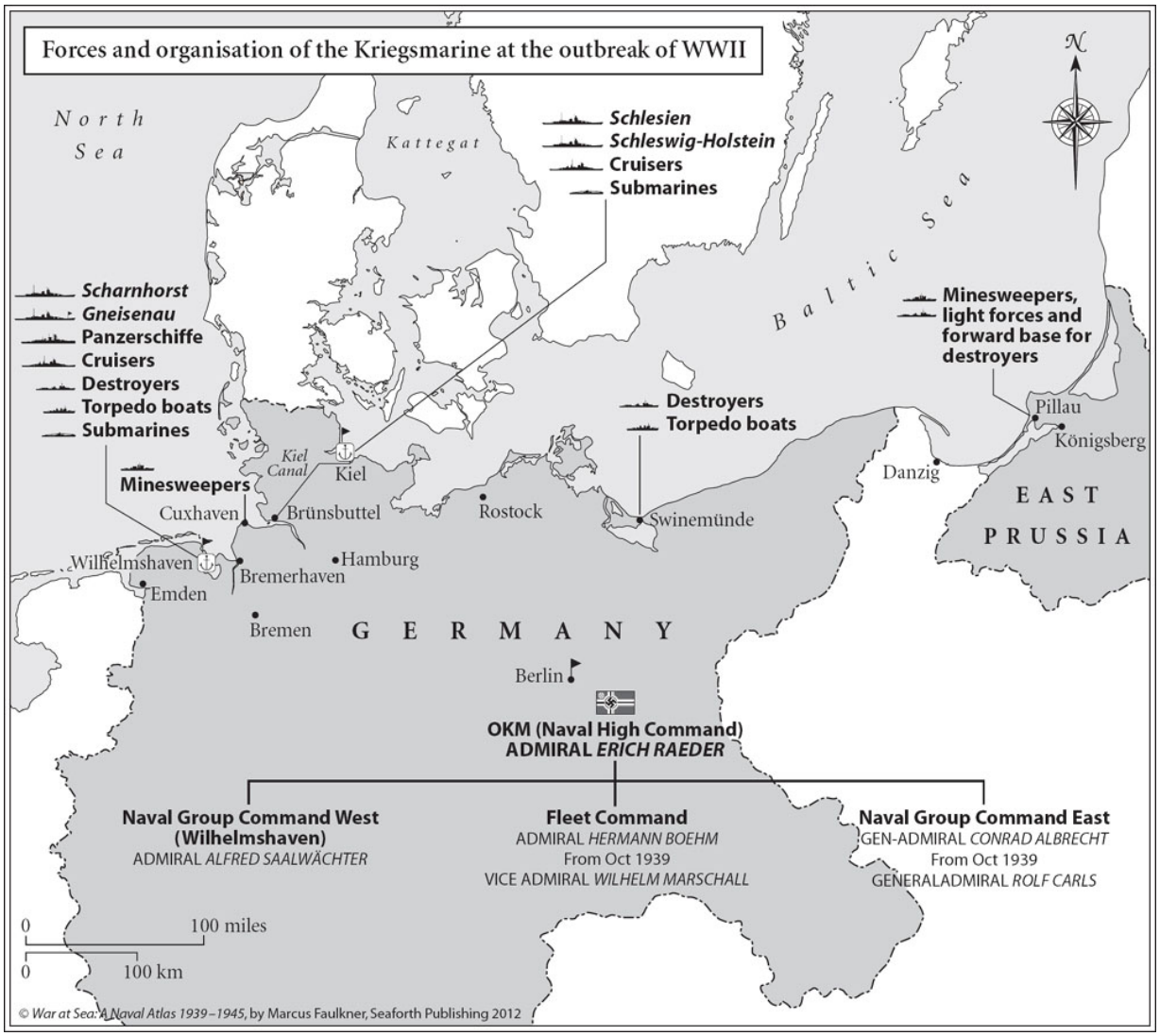
Raeder (*second left*) at his happiest, among his men on board *Scharnhorst*. (Author's collection)

During the early period of Nazi rule, Raeder managed to keep the Kriegsmarine isolated from the politicisation that permeated the other services, even if he in public speeches declared his full support for the Nazi regime and its ‘battle against Bolshevism and international Jewishness’. Raeder was not blind to reality, but it seems that he wanted to avoid a war with Britain so much that he readily accepted Hitler’s word that a fleet to fight Britain would not be needed for many years. Nevertheless, in May 1938, during the first Czechoslovak crisis, Raeder was called to the Chancellery and informed by Hitler that from now on Britain would have to be considered as a potential future enemy. The navy would have to accelerate the completion of *Bismarck* and *Tirpitz* and develop a plan for increased warship construction to meet the new situation. Reluctantly, Raeder tasked Fregattenkapitän Helmuth Heye of the OKM’s Operational Department to assess the options for a naval war against Britain.

The forty-three-year-old Heye was an intelligent and outspoken officer with unorthodox views on naval warfare. He composed a memorandum that strongly advocated preparing for ‘cruiser’-warfare against British supply lines rather than spending resources building battleships for another Jutland-style encounter.[52] The admirals of the OKM were horrified. No navy would be complete without battleships! Their alternative was a fleet of fast, powerful battleships capable of taking on the Royal Navy as well as operating against convoys and merchant ships in the Atlantic. Neither of the proposals considered the U-boat as a decisive weapon on its own. Heated discussions followed, but in the end the battleship alternative won and was presented to Raeder on 31 October 1938. Raeder, believing he had at least eight years to build, accepted the concept for the so-called Z Plan and forwarded it to the Führer, recommending a balanced capital fleet, customised for merchant war, with a moderate number of U-boats. Hitler agreed, but the Z Plan would never be more than a dream. Building such a fleet would have been a massive drain on Germany’s military resources,

even in peacetime, and Raeder simply did not carry the weight in the German system to divert sufficient amounts of high-quality steel or skilled workers to the shipyards. Guns, tanks and aircraft would have priority.

In November 1938, Raeder ended up in a disagreement with Hitler over the design and fighting capabilities of the *Bismarck-class* battleships shortly to be launched. Raeder threatened to resign and Hitler backed down, but a critical gap had been opened between the two men. At the launch ceremony of the battleship *Tirpitz* in Wilhelmshaven on 1 April 1939, Raeder was promoted to Grossadmiral, Grand Admiral, but it still appears that he, and thus the Kriegsmarine, increasingly lost touch with Nazi reality in this period. To Raeder's bafflement, Hitler in a speech to the Reichstag on 28 April 1939 unilaterally annulled the Anglo-German Naval Treaty without any discussion whatsoever. The Kriegsmarine had been excluded from the inner circles of the Third Reich and Raeder would from then on only be invited to meetings that had naval affairs on the agenda. Critically, he would be without a liaison officer in the Chancellery until Konteradmiral Karl-Jesko von Puttkamer was appointed Adjutant der Kriegsmarine beim Führer und OKW, Naval Liaison Officer, at the outbreak of the war.[53]



On 27 January 1938, Hitler issued a decree announcing himself Commander-in-Chief of the Armed Forces. The authority would be exercised through a new High Command, the Oberkommando der Wehrmacht or OKW, to which the army, navy and air force would be subordinated. Generaloberst Wilhelm Keitel was appointed head of the OKW, while Generalmajor Alfred Jodl was given charge of the Operations Staff (Führungsstab). The OKW, reporting directly to Hitler through Keitel and Jodl, was intended to coordinate the activities of the three fighting services, the civil administration and the production authorities, combining strategic, operational and ministerial functions. In effect, though, it became

Hitler's personal staff, manned by advisers picked mainly for their loyalty, with no responsibilities outside the OKW and not representing the services in a normal sense.

Generaladmiral Alfred Saalwächter in charge of Marinegruppenkommando West – Naval Group Command West.

Konteradmiral Otto Schniewind, Chief of Staff of the SKL. (Author’s collection)

The headquarters of the OKM and Admiral Raeder, now Oberbefehlshaber der Marine and Chef der Seekriegsleitung, were at Tirpitzufer in Berlin, next to the Landwehr Canal.[54] The Seekriegsleitung (SKL) or Naval Warfare Command was directly subordinated to the OKM, and the Chief of Staff of the SKL was responsible for naval operations as well as intelligence, administration and construction. Konteradmiral Otto Schniewind, a reserved, analytical and always correct officer, would be the first officer to have this key position; he would become Raeder's right hand in the first phase of the war. Kapitän zur See (later Konteradmiral) Kurt Fricke, an impulsive extrovert, very different from Schniewind, was given the position of Chief of Naval Operations (Chef der Operations-Abteilung – 1.Abtl.SKL).

October 1937: Konteradmiral Lütjens, newly appointed Führer der Torpedoboote coming onboard his lead destroyer *Z1 Leberecht Maass*. Two years later, in October 1939, Lütjens was appointed Befehlshaber der Aufklärungsstreitkräfte, commanding cruisers and torpedo boats. (Author's collection)

The Fleet Headquarters was established at the naval base in Kiel. The C-in-C Fleet (Flottenchef) was originally in charge of capital ships, cruisers and submarines. Generaladmiral Hermann Boehm was appointed Flottenchef in October 1938. A year later, he was replaced by Admiral Wilhelm Marschall when Boehm fell out with Admiral Saalwächter over how to conduct the mine-laying operations on the British east coast.[55] At the same time, the command of the Flottenchef was limited to the capital ships. Konteradmiral Günther Lütjens, in the position of C-in-C Reconnaissance Forces (Befehlshaber der Aufklärungsstreitkräfte – BdA), controlled all cruisers.[56] Flag Officer Torpedo Boats and Destroyers (Führer der Torpedoboote – FdT) and Flag Officer Minesweepers (Führer der Minensuchboote – FdM) were at first subordinated to the BdA. Initially, the position of FdT covered both torpedo boats and destroyers, but in November 1939 Kapitän zur See Friedrich Bonte was appointed Flag Officer Destroyers (Führer der Zerstörers – FdZ), subordinated to the Flottenchef, while Kapitän zur See Hans Bütow was appointed FdT, remaining subordinated to BdA.[57]

Naval Group Command West – Marinegruppenkommando West – was in charge of operations in the Heligoland Bight, the North Sea and the Norwegian Sea. It was formally established in August 1939 with headquarters in Sengwarden near Wilhelmshaven under the command of Generaladmiral Alfred Saalwächter. Naval Group Command East – Marinegruppenkommando Ost – covering the Baltic from headquarters in Kiel, was led by Generaladmiral Conrad Albrecht until late October 1939, when Admiral Rolf Carls took over as Albrecht retired. The Naval Group Commands were on paper given operational control within their areas of command, but in reality the OKM and SKL would intervene frequently, either through strict operational orders or directly. When at sea beyond the coastal areas, the fleet was, in theory, directly subordinated to the OKM. Where and how this occurred was unclear, though, giving rise to serious

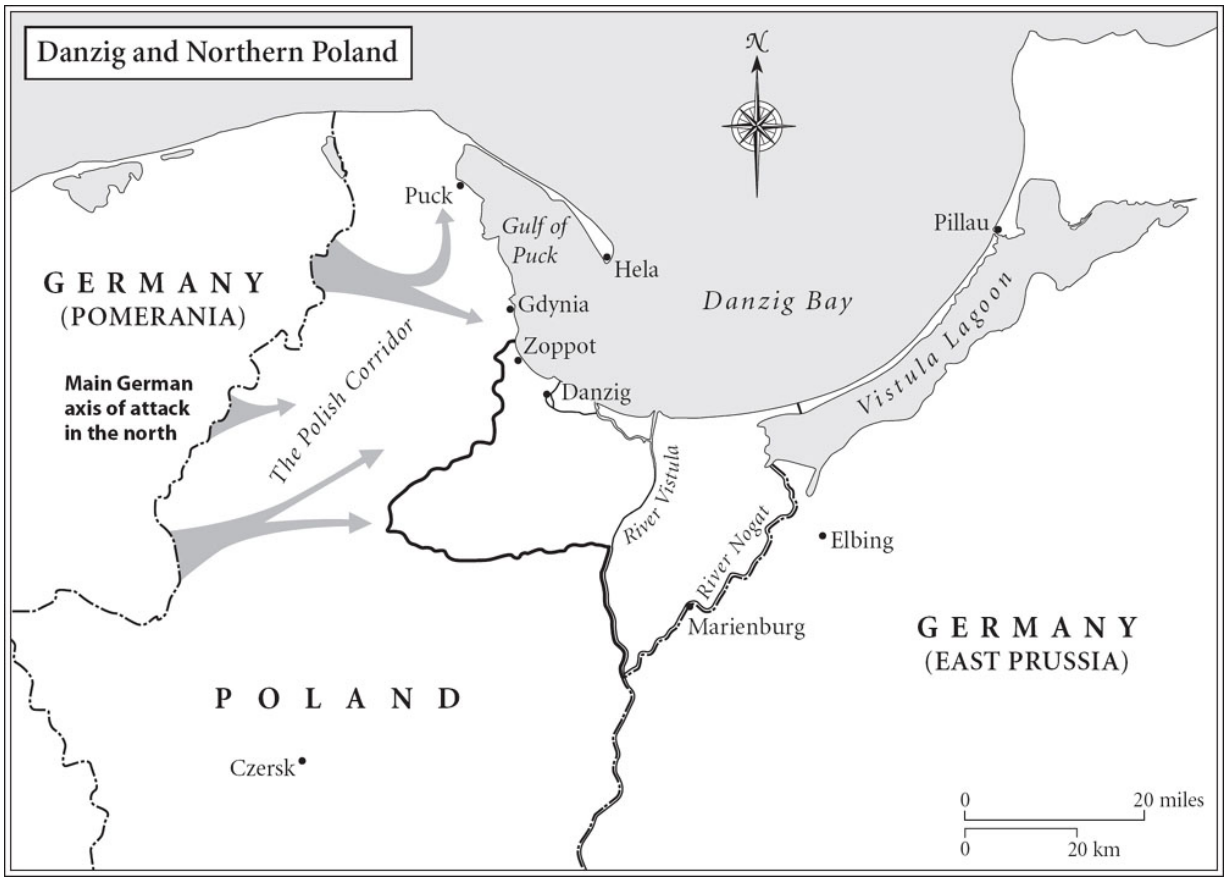
disputes between the commanders, Naval Group Command West and the OKM/SKL during long-range operations of the larger ships in 1939 and 1940.

On the eve of WWII, the Kriegsmarine had in commission two battleships, *Scharnhorst* and *Gneisenau*, two old battleships – *Schlesien* and *Schleswig-Holstein*, three *Panzerschiffe – Admiral Graf Spee, Admiral Scheer* and *Deutschland*, one heavy cruiser – *Admiral Hipper*, six light cruisers – *Emden, Leipzig, Nürnberg, Köln, Karlsruhe* and *Königsberg*, thirty-four destroyers and large torpedo boats, fifty-seven U-boats, and some forty other small vessels. Within weeks, virtually all building of large surface ships, except those near completion, was suspended in order to focus on U-boats and smaller vessels. Eventually, *Bismarck, Tirpitz, Blücher* and *Prinz Eugen* were the only ships larger than destroyers to be commissioned by the Kriegsmarine after the outbreak of the war.

— 4 —
Baltic Eagles

At 04:45 Next Morning

On 13 March 1938, German troops crossed the border to Austria, bringing 6 million German-speaking people into the Reich. The Sudeten area of Czechoslovakia was next and, in spite of the agreement in Munich, Hitler let his soldiers continue into Prague on 15 March 1939. Two weeks later, as a direct result of the German violation of the Munich Agreement, Britain and France guaranteed the independence of Poland, Greece, Belgium, Romania and Turkey. The policy of appeasement had failed.



In the late hours of 23 August 1939, a Treaty of Non-Aggression between Germany and the Soviet Union was signed in Moscow by Soviet Foreign Minister Molotov and his German counterpart, von Ribbentrop.[1] The news of the Molotov–Ribbentrop Pact was met with stunned disbelief by politicians and people worldwide, but in Berlin an assertive Hitler gave orders for the long-planned attack on Poland to commence in the morning of the 26th. He was certain that Britain and France, facing the German pact with Russia, would not honour their promises to Poland other than verbally. Days of hectic diplomatic activity ensued. When Mussolini revealed that Italy 'was not ready for war', Hitler lost his nerve. On 26 August, he ordered the attack on Poland, which he had already set in motion a few hours earlier, to be postponed.[2] Two days later, although tense and visibly tired, Hitler had regained his confidence and decided the attack on Poland

should start in the early morning of Friday 1 September. Directive No. 1 for the Conduct of the War, issued in eight copies, stated that it was:

> important that the responsibility for the opening of hostilities should rest unequivocally with England and France. […] The German land frontier in the west is not to be crossed at any point without my express orders. The same applies to warlike actions at sea – or any which may be so interpreted. (*Pencil note in SKL copy*: According to this, Atlantic U-boats must remain in their waiting positions for the time being.) If England or France open hostilities against Germany […] damage should be done to enemy forces and their economic sources of supply as far as resources allow. […] In its warfare on merchant shipping, the navy is to concentrate on England.[3]

In the evening of 31 August, Hitler confirmed that the invasion of Poland should commence at 04:45 next morning.[4]

'… Am Under Fire'

After WWI, the Prussian city of Danzig was made a semi-autonomous, demilitarised citystate under the protection of the League of Nations, with international representatives taking on the role of high commissioner. Although it was officially independent from both Germany and Poland, German influence remained strong and, with an overwhelmingly German population, Danzig was to become the catalyst for releasing Nazi aggression on Poland.[5]

The Military Transit Depot (Wojskowy Skład Transportowy or WST) on the Westerplatte Peninsula outside Danzig had been established during the Russian attack on eastern Poland in 1919–20. The Polish-held part of the sandy headland, separated from the Neufahrwasser suburb of Danzig by the Harbour Channel, a widened tributary of the Vistula River, was closed behind a high brick wall. There were no real fortifications, just a number of concrete blockhouses and some large barracks, supported by a network of trenches and barricades. To the east, the headland was connected to the mainland via a narrow neck, over which a railway line connected it to the rest of Poland. In September 1939, the depot was held by some 220 men.

Besides handguns, they were armed with one 75-mm field gun, two 37-mm Bofors antitank guns, four mortars and a number of medium machine guns. The commanding officer of the garrison, Major Henryk Sucharski, knew it was expected of him to withstand a German attack for up to twelve hours. By then they would all, according to plan, either be evacuated, relieved or dead.[6]

On 24 August 1939, the German pre-*Dreadnought Schleswig-Holstein* secured in the Harbour Channel, off Neufahrwasser. She was one of the original battleships retained by the Reichsmarine in 1918, now used for gunnery training, and her arrival in Danzig was officially to commemorate the twenty-five-year anniversary of the victory at Tannenberg and the sinking of the cruiser *Magdeburg* in August 1914.[7] During the 25th, dignitaries from Danzig were received by Kapitän zur See Gustav Kleikamp as part of the protocol for visiting warships.[8] Unknown to all of them, Oberleutnant Wilhelm Henningsen and 225 men of 3rd Marine-Stoßtrupp-Kompanie, a naval assault company, were kept out of sight below decks.

Kapitän zur See Gustav Kleikamp (*left*) taking Gauleiter Albert Forster, the Nazi leader in Danzig, on a tour of inspection around *Schleswig-Holstein* in the last days of August 1939. (Author's collection)

After the guests had left, the ship was darkened and made ready for battle. At 21:00, however, a brief signal arrived, cancelling the attack without further explanation. Days of tension and confusion followed until, on the 30th, new orders arrived and *Schleswig-Holstein* was made ready for battle once again.

At 04:47 on 1 September, Kapitän Kleikamp gave the orders to open fire in earnest, releasing the carnage that was to become WWII.[9] In the next six minutes, fifty-nine regular and eight armour-piercing 28-cm shells slammed into Westerplatte from the battleship's forward turret. Some of the 15-cm guns joined in, quickly silencing the Polish 75-mm gun which tried to respond. At point-blank range the trajectories of the German shells were almost flat and it appears that few actually exploded. Still, most of the wooden buildings collapsed and large holes were made in the brick wall protecting the perimeter. Meanwhile, Henningsen and his men landed on the headland and, as soon as the fire from *Schleswig-Holstein* lifted, they advanced, expecting an easy victory. Major Sucharski radioed '… am under fire' to his superiors and ordered the men into the trenches.

Schleswig-Holstein opening fire on Westerplatte at point-blank range in the morning of 1 September 1939. Note the horizontal guns. (Author's collection)

Men of Oberleutnant Wilhelm Henningsen's 3. Marine-Stoßtrupp-Kompanie (naval assault company) advancing on Westerplatte. (Author's collection)

Inside the brick wall, Henningsen and his men were met by intense small arms and machine-gun fire and had to take cover. Several assaults followed after a renewed barrage from *Schleswig-Holstein*, but when Oberleutnant Henningsen was mortally wounded around midday, the attack faltered, in spite of being reinforced by local militia. Amazed by the resistance, Kleikamp moved *Schleswig-Holstein* away from the immediate vicinity of the depot and asked for assistance.

The next day, Ju87 Stukas of StG 2 commenced bombing Westerplatte while *Schleswig-Holstein* continued the bombardment from a distance, supplemented by *T196*, the depot ship *Von der Groeben* and land-based artillery. In spite of the massive onslaught, it was a week before Major Sucharski, in the morning of 7 September, gave the order to surrender. By then, his men were almost out of ammunition, and a growing number of wounded were in dire need of medical attention.[10]

Sailing for Britain

Major Henryk Sucharski (*right*) surrendering to Generalleutnant Friedrich-Georg Eberhardt. (Author's collection)

Crater from a 250-kg Stuka bomb inside Westerplatte. (Author’s collection)

The primary task of the Polish Navy (Polska Marynarkna Wojenna – PMW) was to create a credible deterrence against Soviet and German aggression. Hence, it was decided to build the navy around a number of fast submarines with mine-laying capacity. French capital loans for naval development came with conditions for use in specific French yards, however, and Polish plans for nine submarines were changed to three plus two destroyers, which had initially not been wanted. The submarines *Wilk, Ryś* and *Żbik* and destroyers *Wicher* and *Burza* were poorly designed and plagued by operational problems from the start. In the mid-1930s, the large minelayer *Gryf* was also built in France, while a further two destroyers, *Grom* and *Błyskawica*, were purchased from Britain. Trying to restore the original plans for mine-laying submarines, orders for two large sophisticated vessels were eventually placed in Dutch yards. *Orzeł* and *Sęp*, both commissioned in the spring of 1939, were indeed fine boats, well armed and capable of 20 knots on the surface and 9 knots submerged. At 1,110 tons, though, they were quite large for the shallow waters of the Baltic, and smaller, coastal boats would arguably have been more suitable.[11]

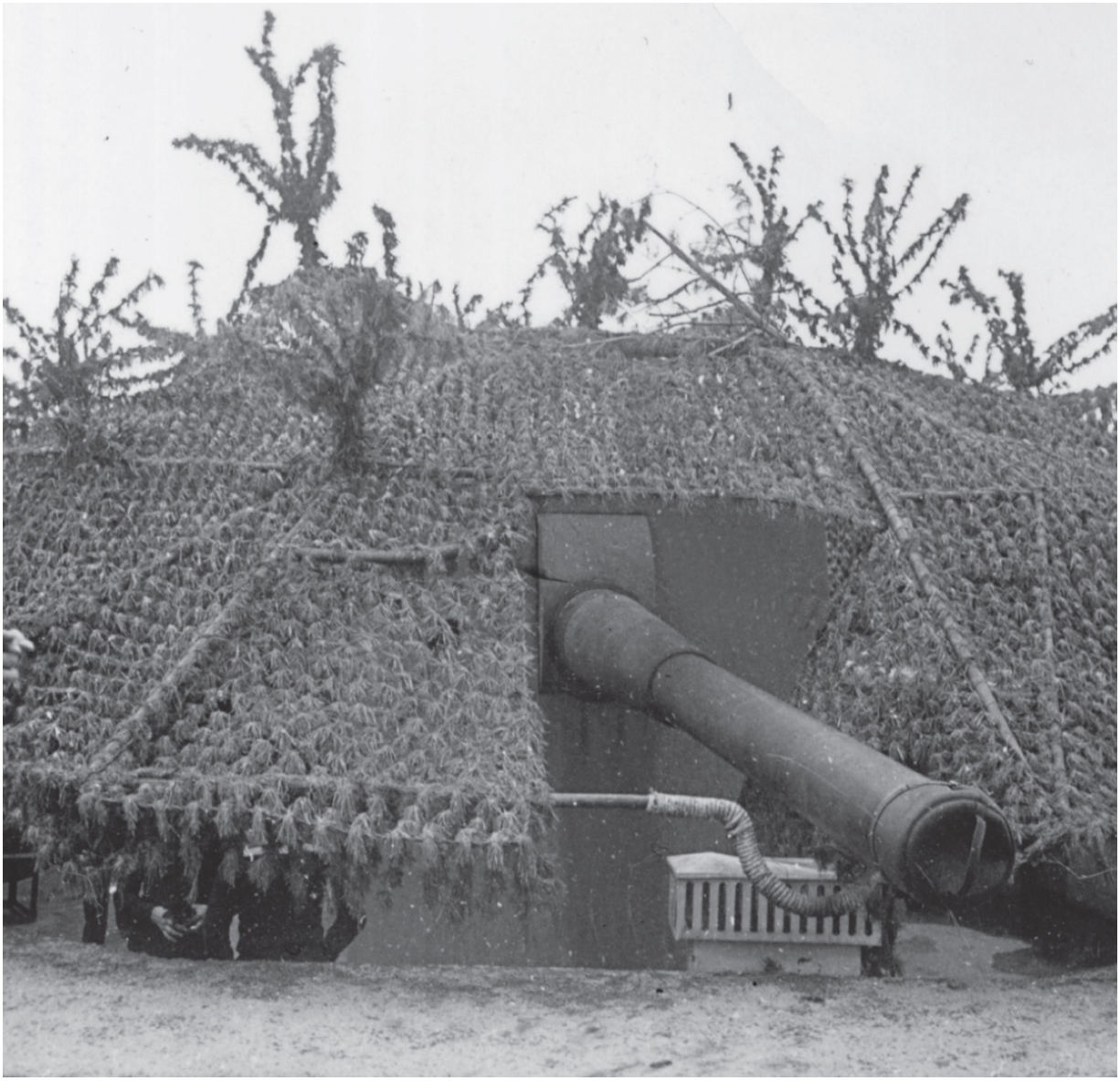
Destroyer *Blyskawica*, October 1937. (R Perkins)

The small PMW would be at a significant disadvantage versus the Kriegsmarine and Luftwaffe, should a confrontation occur. Hence, the head of the British military mission in Poland, Lieutenant General Adrian Carton de Wiart, advised that the most modern elements of its fleet should evacuate the Baltic in case of a crisis and be prepared to fight the war from British ports. At first, the C-in-C of the Polish armed forces, Marshal Edward Śmigły-Rydz, resisted the idea, but eventually he decided discretion was the better part of valour. In August 1939, he ordered that plans should be developed for a departure, should the situation become desperate. Hence the Peking Plan was formed, through which the destroyers of the PMW prepared to leave the Baltic, passing through the Belts before the Germans had time to block them.[12] Part of Śmigły-Rydz's reason for accepting the plan was apparently that he believed that Allied troops, munitions and arms could be escorted by Polish ships to Romanian ports, where they would be out of reach of German aircraft, but connected to Poland by railways.

Kontradmiral Jozef Unrug, Fleet Commander of the PMW, issued the instructions for the Peking Plan on 26 August 1939, the day after the signing of the Polish–British Defence Pact. Sealed envelopes were distributed to the ships in question, with instructions to keep them under lock and key, pending further orders. At 12:55 on the 29th, the order 'Execute Peking' arrived, and the captains could open the mysterious envelopes. The instructions were short and unambiguous: '… *Błyskawica, Grom* and *Burza* to sail for Britain, reaching position off Bornholm by sunset, passing Malmø at midnight. Departure immediate …' An hour later, the three destroyers cast off. For a while they were stalked by the German destroyers *Steinbrinck, Ihn, Eckholdt* and *Heinemann*, but encountered no problems and passed through the Öresund during the night. Next day in the Skagerrak, they were followed by German reconnaissance aircraft, but a change of course towards the Norwegian coast during the ensuing night shook them off. At 09:25 on 1 September, in the North Sea, information of

the German invasion of Poland arrived. At 17:37 on the first day of the war, the Polish destroyers docked in Leith.[13]

The remaining Polish naval surface ships, destroyer *Wicher*, minelayer *Gryf*, mine-vessels *Jaskółka, Czapla, Żuraw, Czajka, Rybitwa* and *Mewa*, gunboats *Komendant Piłsudski* and *Generał Haller*, and some smaller vessels, received orders during 1 September to relocate from Oksywie to the naval base on the Hela Peninsula.[14] From there they were to commence Operation Rurka, laying minefields at the entrance to Danzig Bay to disrupt German traffic. Meanwhile, the submarines were deployed in predetermined operational zones in Danzig Bay and the southern Baltic for Operation Worek – sinking as many German ships as possible. A minefield should have been laid outside Gdynia harbour on the 29th, but a neutral Greek ship, hesitating to depart, prevented this.[15] At Hela, some 15 miles north of Danzig across Puck Bay, around three thousand soldiers were manning a set of strong defensive lines and formidable amounts of A/A guns, searchlights and coastal batteries with in all four 15.2-cm guns, four 10.5-cm guns and some twenty-five smaller guns.[16]



Polish 15.2-cm guns at Hela. (Author’s collection)

In the afternoon of 1 September, *Gryf* and the other mine-vessels cast off from Gdynia for Operation Rurka. *Wicher, Piłsudski* and *Haller* joined as cover. En route, they were attacked by Ju87 Stuka dive-bombers of 4. (St)/TrGr 186. There were no direct hits, but a bomb exploded in the water close to *Mewa*. All twenty-two men on board were either killed or wounded and she had to be taken in tow by *Rybitwa. Gryf* was also damaged by splinters and strafing. Among the casualties was her captain, and first officer Lieutenant Commander Wiktor Łomidze took command. He decided the 300 mines on board were a liability and, having their triggers removed, he ordered them thrown overboard. Operation Rurka was no longer possible, and the ships headed for Hela under continued air attacks. Lieutenant Commander Stefan de Walden of *Wicher* did not receive the information that the operation had been called off and continued to the rendezvous area to cover the mine-laying. While he was waiting through the night, German destroyers were sighted on two occasions, but de Walden did not attack, as he feared he might compromise the operation he still believed he was covering. Realising in the morning of the 2nd that something was wrong, de Walden took *Wicher* to Hela.[17]

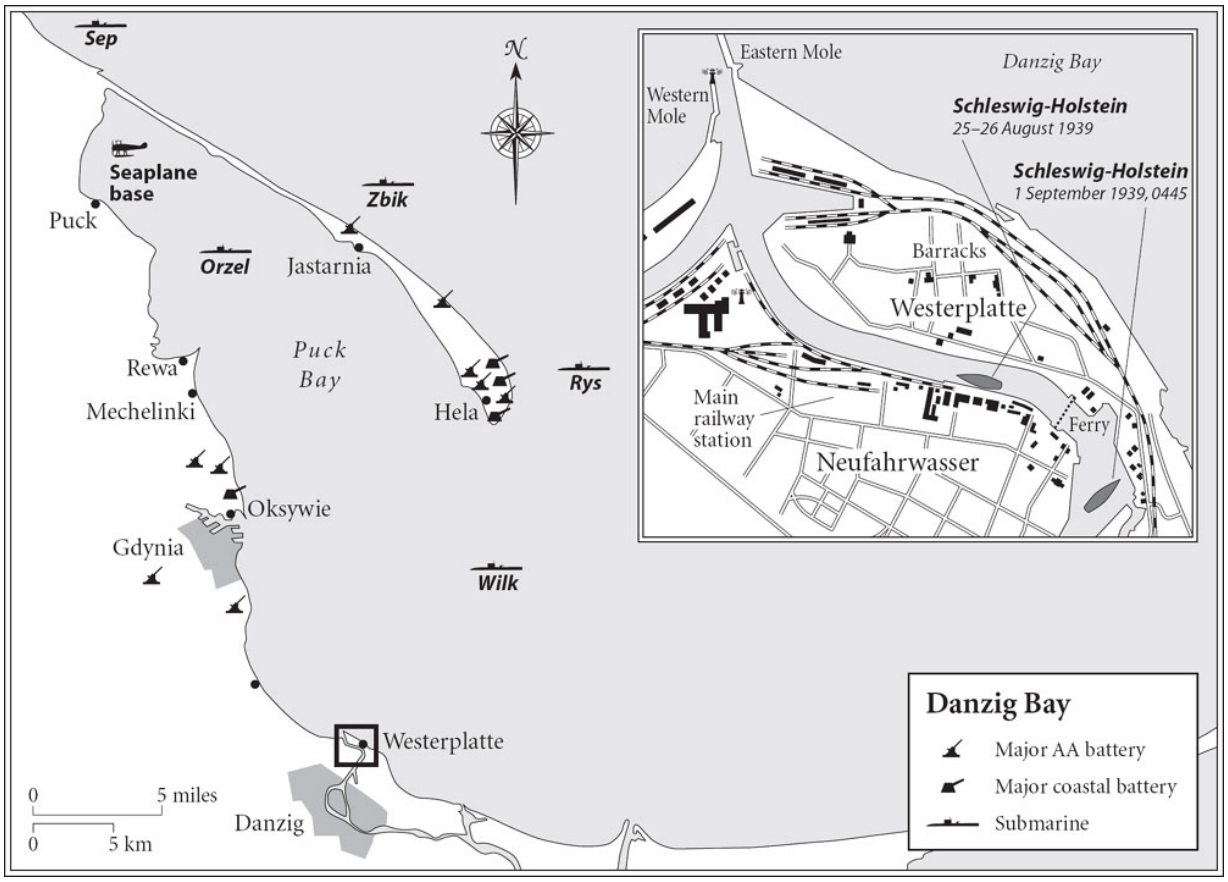
The Kriegsmarine saw the primary threat from the PMW to be against the troop and supply convoys between Germany and East Prussia. Extensive minefields were expected and the coastal batteries on the southern tip of the Hela Peninsula, which covered a large part of western Danzig Bay, would have to be avoided. A large number of destroyers, minesweepers, escort vessels and cruisers were allocated to support the operations. Minesweepers would be sent in to clear the anticipated minefields as fast as possible, prioritising Danzig Bay. Destroyers would stand by, outside the range of the Polish coastal artillery, waiting for the bay to be declared mine-free. Beyond these, a number of U-boats (Type II and Type VII) would make a defensive barrier, while Vizeadmiral Hermann Densch with *Köln, Leipzig* and *Nürnberg* would be patrolling further out in the Baltic as back-up,

should anything unforeseen develop. The Flottenchef, Admiral Boehm, found this somewhat excessive and sent a letter to Raeder on 21 August, arguing that in the event that Britain and France honoured their obligation towards Poland, a larger part of the Kriegsmarine would be needed in the west. Raeder did not agree, and Generaladmiral Albrecht, in overall charge of the naval operations against Poland, was allowed to continue the preparations for Fall Weiss.[18]

In the early hours of 1 September, the German naval ships moved into position off the Polish coast. The sea was calm, with patches of fog in some places. As the attack progressed on land, the Polish Navy declared Danzig Bay to be mined, but several merchant ships moved unharmed through the area and no mines were encountered by the sweepers. When on the 2nd all Polish territorial waters were declared dangerous, this hardly raised a German eyebrow. By now, the Polish surface fleet was accounted for, either on its way to Britain or at Hela under air attack, leaving only the submarines for the Germans to worry about. All U-boats were pulled out of the area from Swinemünde to Memel and the German A/S forces were given ‘free hunt’. In the afternoon of the same day, Densch was ordered back to the North Sea with his cruisers. There was no further use for them in the Baltic.

The majority of the German aerial attacks on the Polish harbour installations, warships and coastal batteries in the first days of the war came from the reinforced 1st Fliegerdivision of Generalleutnant Ulrich Grauert. In addition to the regular fighter and bomber units of the group, four Ju87 Stuka dive-bomber units had been added for the occasion: II/StG 2, III/StG 2, IV/LG 1 and the naval Stuka squadron 4.(St)/TrGr 186 – the latter assigned to attack the naval bases along Danzig Bay.[19] Dense fog in the morning of 1 September prevented air attacks in many places inland. Along the coast, the fog was patchy, lifting early, and there were few restrictions.

Around midday, 4.(St)/TrGr 186 attacked Hela for the first time, losing two of its aircraft to A/A fire.



Adapted from many sources. Insert map modified from Smedberg and Zetterling, *Utbruddet av andre verdenskrig*.

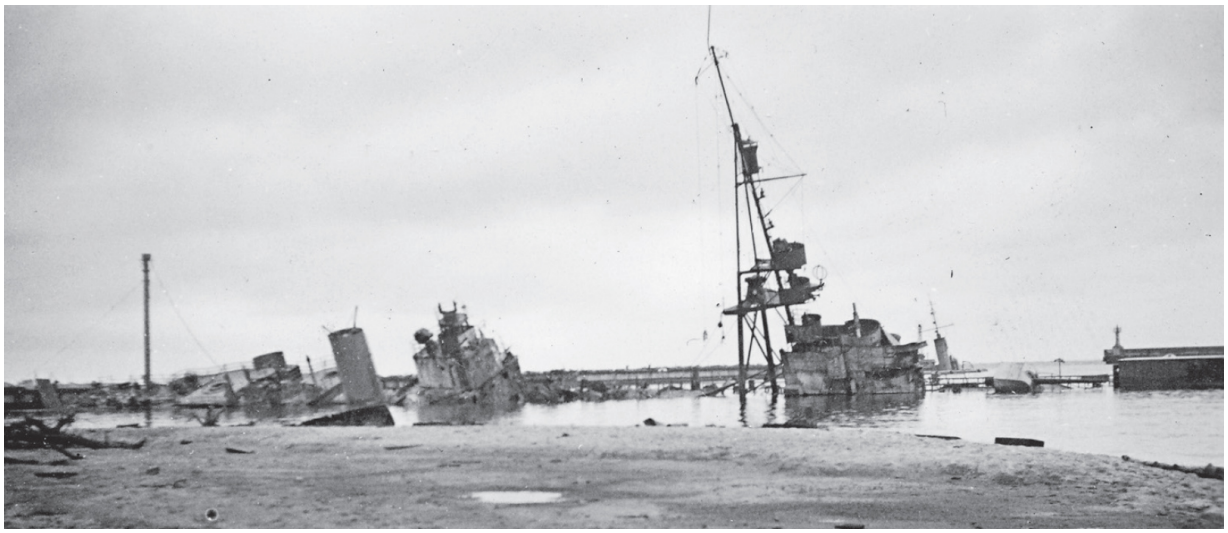
On the 3rd, FdT Konteradmiral Lütjens took the destroyers *Leberecht Maass* and *Wolfgang Zenker* towards Hela to test the coastal defences. *Gryf* and *Wicher* were both moored in the harbour and opened fire, as did the 15-cm shore batteries. At least one shell, presumably from *Wicher* or *Gryf*, hit *Maass* in the B-gun turret. Four sailors were killed and another four wounded. Outgunned by a fair margin, Lütjens pulled back behind a smokescreen, but not before *Gryf* had been hit and lightly damaged. As the *Zerstörer* left, *Jaskolka* and *Rybitwa* headed towards Gdynia to pick up reinforcements.

Later in the day, the Stukas of 4.(St)/TrGr 186 arrived again. *Gryf* was hit by at least one bomb and partially sunk, with fires raging through the portions above water. When the fires were finally extinguished after two days, the minelayer was a sorry sight. The two stern 12-cm gun mountings, one twin, one single, were dismounted and taken ashore before the wreck was abandoned. Mounting the guns on land was time consuming, though, and they were not operational until 30 September, just before the base surrendered. *Wicher* also received the attention of the TrGr 186 Stukas. Two attacks were repulsed, but at around 15:00, three bombs hit the destroyer in short succession, two amidships and one in the bow. A fourth bomb exploded in the water close to the starboard side, fracturing the hull in several places. One man was killed, twenty-two were wounded. *Wicher* capsized and the PMW's surface fleet was, for all practical purposes, no more. In the afternoon of 4 September, Lütjens was ordered back to the North Sea with the destroyers and S-boats, leaving the Polish submarines for the minesweepers and R-boats to deal with.[20]

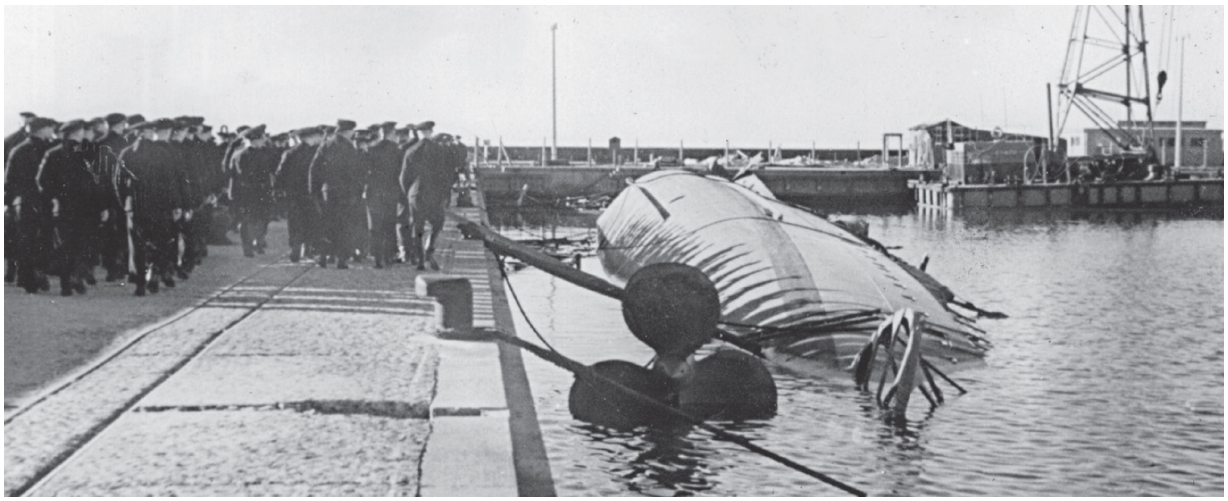
In the afternoon of 9 September, Admiral Raeder arrived in Danzig. After an inspection of the ruins of Westerplatte, he went on board *Schleswig-Holstein*, where he addressed the men and officers, handed out medals and sat down with FdM Kapitän Friedrich Ruge to discuss the continued naval operations, including harbour defence and convoy protection.

Raeder visiting on board *Schleswig-Holstein*, 9 September. Kapitän Kleikamp, behind him, does not look too happy and there are indications that he was deeply disturbed when he realised what he had been part of. (Author's collection)

Meanwhile, German forces occupied Gdynia on 14 September, leaving Hela as one of the few remaining pockets of Polish resistance.[21] The Hela Peninsula had been the subject of air attacks from the first day of the campaign, but German land forces did not arrive at the headland until 9 September. Resistance was fierce and the advance was slow down the 20-mile-long peninsula towards Hela proper, to where Admiral Unrug had moved his HQ from Gdynia. At 10:00 on the 14th the Stukas arrived over Jastarnia harbour. When they left, the mine-vessel *Jaskolka* was a burning wreck, while *Czapla* and *Rybitwa* were both severely damaged. The former was beyond repair and abandoned; *Rybitwa* limped south to Hela harbour with *Czajka* and *Zuraw*, which had sustained only light damage, to be used as floating batteries.

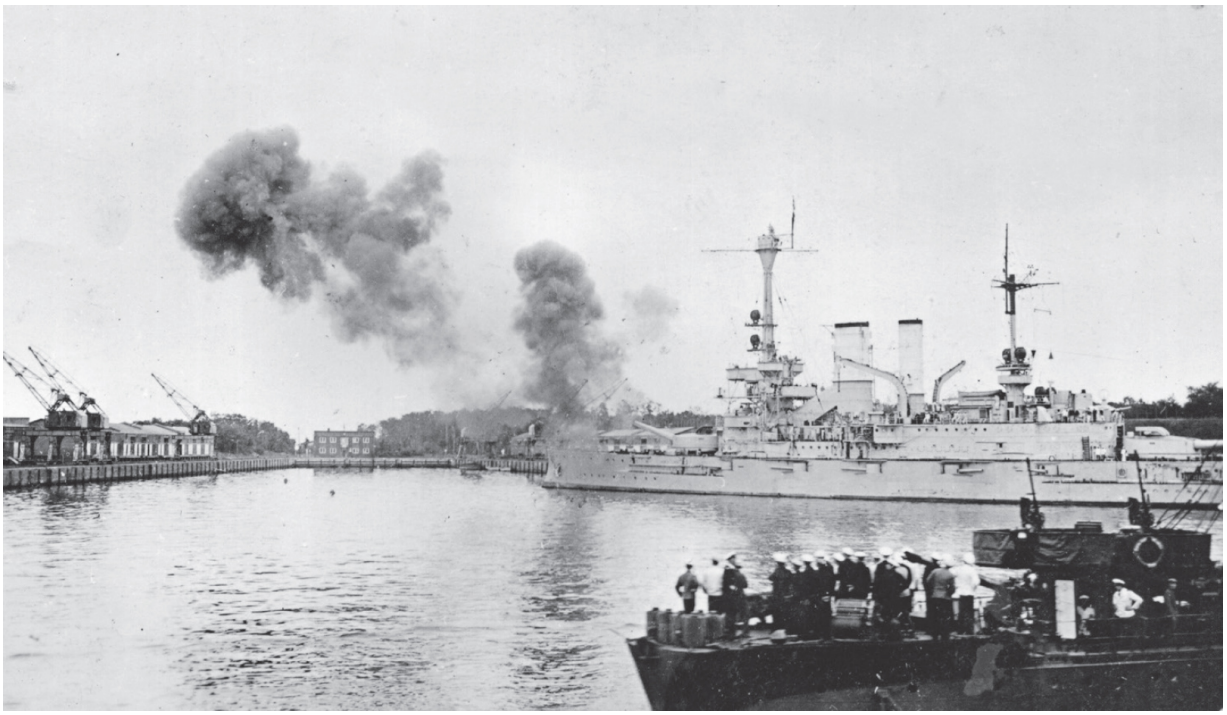


The ones that did not get away. The wreck of *Gryf*. (A Wilmar Collection).

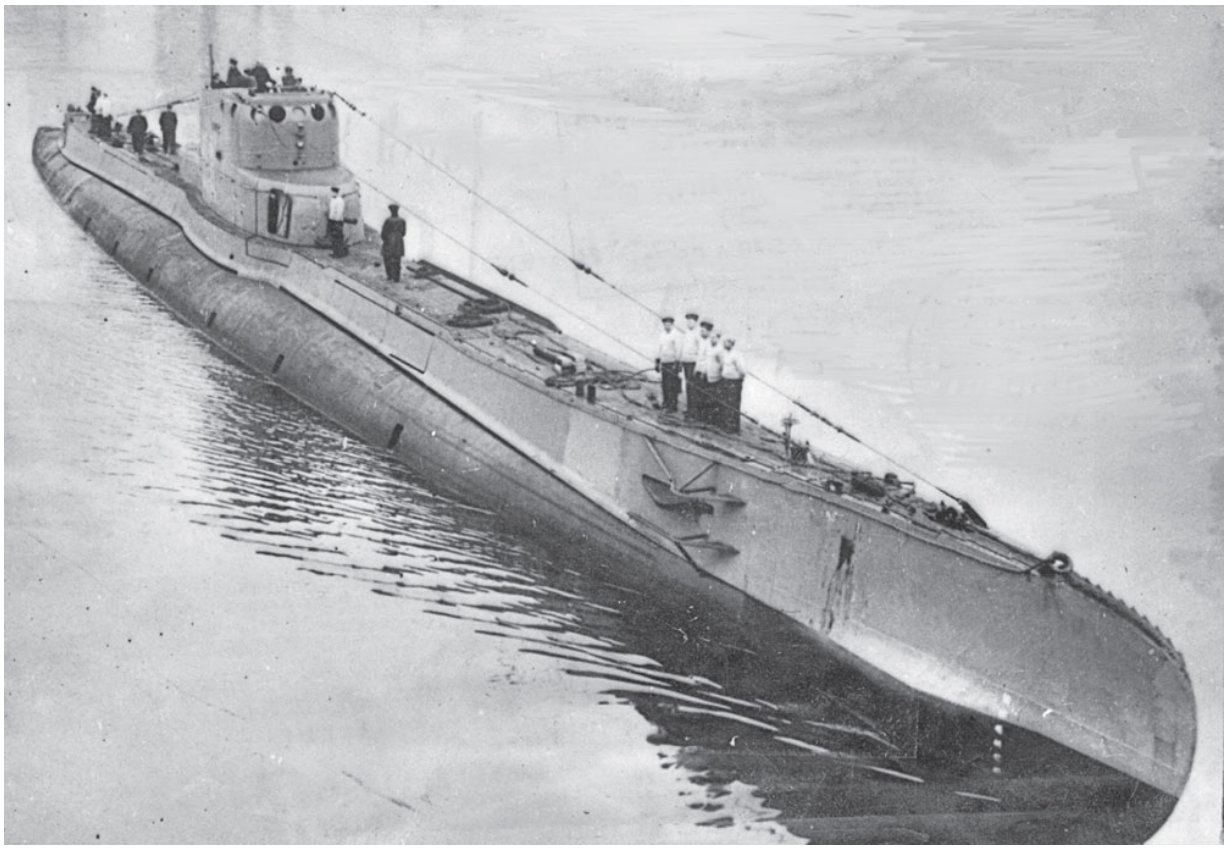


The ones that did not get away. *Wicher*, capsized at Hela. (Author's collection)

Schleswig-Holstein, Schlesien and some smaller ships remaining in the east shelled the Hela Peninsula for several days from 23 September. Smoke and dust from the exploding shells gave the impression of brutal efficiency, but the results were actually rather limited. Quite to the contrary, *Schleswig-Holstein* was damaged by return fire from the coastal batteries, after which the battleships withdrew, continuing the shelling from some 9 miles distance, reducing the effect further.[22] The Stukas of TrGr 186 were sent to finish the job, and the outcome was inevitable. During the night of 1/2 October, the remainder of the garrison at Hela laid down their weapons, ending the Polish campaign. By then the harbour and naval base at Hela was a graveyard of sunk or scuttled ships surrounded by ruins.[23]



Schleswig-Holstein firing on Hela from Langführ. Note the elevation of the guns as the target is on the other side of Danzig Bay. (Author's collection)



Submarine *Orzel*. (Author’s collection)

Just after the ceasefire had been agreed, the German minesweeper *M85* struck one of the very few Polish mines that had not already been swept and sank rapidly around 5 miles north-east of Jastarnia. Twenty-four men perished.[24]

Predicament

The five Polish submarines, *Orzeł, Wilk, Sęp, Żbik* and *Ryś*, were supposed to create a defensive screen in and around the entrance to Danzig Bay, attacking German convoys to East Prussia and naval vessels shelling coastal positions. The plan, collectively known as Operation Worek, called for *Wilk* to operate inside Danzig Bay, *Sęp, Żbik* and *Ryś* outside in the Baltic and *Orzeł* to stand by as reserve in the Bay of Puck. The captains had strict orders not to lay their mines until specific orders arrived and to conserve their torpedoes for 'significant military targets'. This disposition was far less aggressive than expected by the Kriegsmarine, which anticipated that the Polish boats would operate against their warships and transports in the entire southern and western Baltic. In the shallow coastal waters, the submarines would be vulnerable to A/S counter-measures and the Worek Plan actually took the submarines away from where the enemy would be. In the event that the Polish naval bases were overrun, the submarines should remain as long as possible in the Baltic, inflicting maximum damage, and then leave for Britain. If this was not possible, refuge should be sought in a neutral port.

In the morning of 1 September, *Sęp, Żbik* and *Ryś* were at Hela, while *Orzeł* and *Wilk* were at Oksywie. The emergency call from Westerplatte sent all five submarines to sea, but air activity was intense and they had to stay submerged. It would be evening before they were in place as planned.[25]

When the PWM was mobilised, Lieutenant Commander Boguslaw Krawczyk of the submarine *Wilk* took onboard ten torpedoes, twenty-two mines and 114 shells for the 10-cm deck-gun before taking to sea. In the morning of the 2nd, the German destroyer *Erich Steinbrinck* was sighted, bombarding the naval base on the Hela Peninsula. Krawczyk prepared to attack, but while getting into position, *Wilk* came under attack from a group of A/S vessels, forcing him to dive deep and withdraw. Three days later, preparing to lay mines off Hela, *Wilk* was again attacked by German A/S vessels. Again she escaped and Krawczyk decided to withdraw north towards the coast of Sweden.

On the way, *Wilk* was constantly harassed by German A/S vessels and it was obvious that she was leaving a trail of oil from leaking tanks. Krawczyk decided it was better to lose his boat fighting than fleeing and prepared to surface. By the time *Wilk* broke surface, though, the sea was empty. Undoubtedly relieved, he continued northwards, cleaning the leaking tanks to stop leaving a trail. Two days later, on the 11th, the cruiser *Hipper* was sighted and Krawczyk prepared for an attack. Before he could get into position, however, the cruiser turned away. Later the same day, orders were received from the Polish Naval Command for all submarines to head for Britain. Krawczyk waited until a convoy appeared on a westerly course near the Swedish coast and, surfacing, positioned his submarine close by. Approaching Öresund at dusk on the 14th, the German destroyer *Richard Beitzen* and the torpedo boat *T107* were sighted, but, as Krawczyk had hoped, they believed *Wilk* was a Swedish submarine escorting the convoy and did nothing. The same day, Krawczyk took his boat through the Kattegat and, on the 20th, *Wilk* arrived in Rosyth.[26]

At Oksywie, *Orzeł* was ordered to slip anchor and head for her pre-ordained sector in the Bay of Puck immediately after the first air raids on 1 September. Over the radio from Hela, Lieutenant Commander Henryk Kloczkowski, received orders to look out for and attack *Schleswig-Holstein*

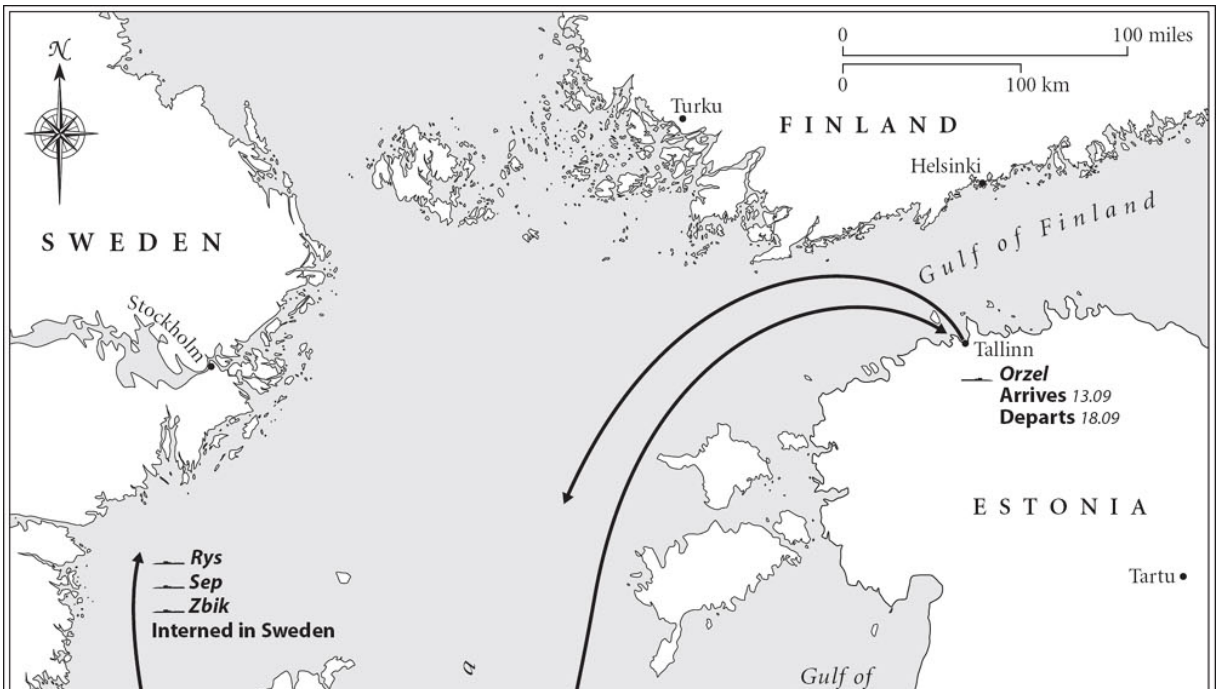
should she leave Danzig. German aircraft and A/S vessels kept the submarine below most of the time, though, except for a few hours every night. Learning the fate of the surface ships, Kloczkowski decided on the 4th to head for the Baltic.[27] On the way, *Orzeł* was subjected to a particularly violent attack by the minesweepers *M4* and *M3*. One depth-charge exploded just above the boat, sending it crashing into the sea-bed. All lights went out and water started leaking through the diesel exhaust valve. The attack lasted all day, but eventually *Orzeł* managed to get away under cover of darkness. An oil leak had developed, which could not be repaired at sea, and Kloczkowski decided that the best thing would be to enter Tallinn in neutral Estonia to seek assistance. Anchoring there on the night of the 13th, Kloczkowski – who had been sick for several days – left his boat and was hospitalised.[28]

At first the Estonians accepted the reference to the Hague Convention, and measures were taken to facilitate repairs. Pressure from Germany was instant and, a few hours later, an armed detachment boarded the boat, informing the crew that they had been interned, confiscating maps and navigation aids. During the night, removal of the ammunition for the deck gun and the torpedoes commenced. By midday on the 14th, all forward torpedoes had been landed, but Kapitan Marynarki Jan Grudzinski, first officer and in command while Kloczkowski was in hospital, managed to sabotage the torpedo hoist and the six torpedoes aft were left on board. Instead, Grudzinski and the new first officer, Lieutenant Andzej Piasecki, worked out a plan to escape. Dismantling work on the engine and radio were delayed under all kinds of pretexts and, a few nights later, the Estonian guards were overpowered, the mooring wires cut, and *Orzeł* got under way.[29]

The alarm was immediately raised and some light guns of the harbour defences opened fire. Fortunately for the Poles, the larger guns held back, allegedly from fear of hitting their own ships moored around the port. In

reality, most of the Estonian military probably cheered the Poles as they raced for the open sea. *Orzeł* touched a sandbank near the exit of the harbour, but Grudzinski managed to get her off and the submarine slipped away into the Baltic.

With no charts on board, Grudzinski intended to board the first German merchant vessel he met and take her maps. No German civilians were encountered, though; only warships looking for them. After three weeks of fruitless searching for something on which to use her remaining aft torpedoes, Grudzinski finally decided it was time to leave the Baltic, heading for Britain. The entrances to the Belts were closely guarded by German A/S ships, but *Orzeł* managed to crawl through during two days of high tension, with the help of a map drawn from memory by the navigating officer, and a list of Swedish lighthouses. On 14 October, some fifty days after she sailed from Oksywie, *Orzeł* made landfall off the east coast of Scotland. A signal was sent in plain English and a British destroyer came out to escort her into port, much to the surprise of the Admiralty, who had thought her long since sunk. After a refit, *Orzeł* was assigned to the 2nd Flotilla, deployed in the North Sea and Skagerrak.[30]



Orzeł's sister boat *Sęp* had been rushed home from the Dutch yard a few months earlier and was yet not fully tested by her crew when she took to sea. On 2 September, *Sęp* fired a single torpedo at the German destroyer *Friedrich Ihn*. The speed of the destroyer was underestimated, and the torpedo missed, in spite of the submarine being only 400 yards away. *Ihn* counterattacked with a vengeance and the submarine crawled away with severe oil leakages as well as other damage, water seeping into the boat. On the 3rd, *Sęp* was at the receiving end of a torpedo from *U14*, but the torpedo exploded prematurely and she escaped again.[31] On 13 September, orders were received to sail to Britain if possible or, if not, to a neutral Swedish port for internment. By now conditions on board the boat were severe due

to the extensive damage and leaks and, when Hela confirmed it would not be possible to return there, Commander Salamon was in a predicament. Considering all options for another day and finding it would take half an hour to dive safely, he finally decided the best he could do would be to seek refuge inside Swedish territorial waters. On 17 September, *Sęp* appeared off Stockholm, requesting permission to enter the harbour for repairs, knowing that this would mean internment.

Ryś had also been damaged through repeated attacks from German A/S forces and aircraft and her captain decided to head for Sweden on the 18th. Both submarines were interned for the duration of the war and taken to Vaxholm, north-east of Stockholm. On the 25th, they were joined by *Żbik*, her captain also having concluded that his boat was not in a condition to break out for Britain.[32]

Except for *M85*, which foundered on a mine laid by *Żbik*, no German ships were sunk by the Polish submarines during the campaign, nor were any of the submarines sunk.[33]

— 5 —
What Now?

To Die with Dignity

At 21:30 on 1 September 1939, the British ambassador to Berlin, Nevile Henderson, delivered a memorandum to Foreign Minister von Ribbentrop, stating, 'unless His Majesty's Government received satisfactory assurances that the German Government had suspended all aggressive action and would be prepared to withdraw its forces from Polish territory', Britain would fulfil its obligations to Poland. Half an hour later, a similar message was delivered by the French ambassador.

Nothing was heard from Berlin, and in the morning of 3 September, a final ultimatum came from London, setting the deadline for an answer to 11:00 British time that same day. Henderson hastened to the German Foreign Office with the note, giving it to chief-interpreter Paul Schmidt, the only one there, who brought it to the Chancellery, where most ministers and party leaders were assembled in Hitler's office.[1] According to Schmidt, Hitler, when he received the document, sat as if petrified, before he turned to Ribbentrop with a wild stare, asking, '*Was nun?*' – 'What now?' Shortly after the deadline, Ribbentrop informed Henderson that Germany refused any demands and, fifteen minutes later, a disappointed Prime Minister Neville Chamberlain told the British people on the radio, sounding drained, that:

> This morning, the British ambassador in Berlin handed the German Government a final note stating that, unless the British Government heard from them by 11 o'clock that they were prepared at once to withdraw their troops from Poland, a state of war would exist between us. I have to tell you now that no such undertaking has been received and that consequently this country is at war with Germany.

In the afternoon of 3 September, Raeder was called to the Chancellery and informed by a visibly shaken Führer that he 'had not been able to avoid war with England after all'.[2] Disturbed, Raeder went back to his office and sat down to compose a memorandum for the SKL war diary. After recording Hitler's repeated assurance that a war with Britain would not commence before 1944 at the earliest, he added:

> the U-boat arm is, in spite of its determinations, too weak to have a decisive effect on the war. The surface forces [of the Kriegsmarine] are still so inferior in number and power to those of the British fleet that, even at full strength, they can do no more than show that they know how to die with dignity and thus create the foundation for a later reconstruction.[3]

In July 1939, the Kriegsmarine had held extensive U-boat exercises in the Baltic. Admiral Raeder came to oversee the event and Dönitz had several discussions with him in private. During these meetings as well as in the final speech to the officer corps at Swinemünde after the exercises, Raeder repeatedly held that Hitler had assured him there would be no war with Britain.

The Kriegsmarine was nowhere near the strength needed to sustain a successful war with the Royal Navy. Raeder knew this better than anyone, but it is difficult to accept his claim that he really had not anticipated that it might happen. He was fairly isolated from both the civilian and the military administration, though, and might have chosen to believe what Hitler told him out of convenience, as he could do little about the situation other than to follow the building plans and hope for the best. The navy was under constant threat to have its personnel transferred to the army and the guns taken off the ships to be used on land instead, and Raeder had no wish to rock the boat by arguing with the Führer.

Three main tasks were seen for the German Navy in September 1939: firstly, to defend the German coastlines in the North Sea and the Baltic from attacks and mine-laying; secondly, to protect German sea lanes (though

these were few and less important than those of Britain and France); and, last but not least, to attack Allied sea lanes.

At 12:15 German time on 3 September, the SKL issued a signal from Berlin to all units: '*Beginn der Feindseligkeiten mit England sofort*' – 'Begin hostilities with England forthwith'. To gain the initiative was vital, but meeting the Royal Navy head-on would be futile. To sever or even hurt the British sea lanes, Raeder believed he would need several balanced groups of fast, well-armed battleships and cruisers as well as auxiliary raiders and U-boats. Such a fleet did not exist, of course, and, in fact, the size and composition of the German navy in September 1939 would make the North Sea the most likely battlefield.

Konteradmiral Karl Dönitz, autumn 1939. (Author’s collection)

Except for the raids of *Deutschland* and *Graf Spee*, Atlantic operations were by default limited to U-boat operations west of the British Isles. In a meeting on 7 September, Hitler made it clear to Raeder that, as a result of the unclear political situation, no offensive action should be taken against France. The U-boats were to avoid attacking passenger ships in general and all French ships in particular. *Graf Spee* and *Deutschland* were to remain inactive and French ports were not to be mined. The OKW underlined that no operations whatsoever should be initiated that could draw British attention to the Western Front until the land offensive had commenced.[4]

In spite of Raeder's initial gloominess, the attitude of the Kriegsmarine quickly developed into a determined will to fight and not to be closed up in port, as it had been during the last conflict. Two main issues were on the agenda of the SKL during the autumn and first winter of the war: the commerce war against Britain and the role of the navy in the forthcoming offensive in the west. The former would require clever use of all of the Kriegsmarine's resources and as much as could be spared of the Luftwaffe. There was a significant risk of loss, but the navy would receive some credit were it to gain some palpable victories. During an offensive in the west, the Kriegsmarine would inevitably play a secondary role.[5]

On 23 September, Raeder met with Hitler in Zoppot near Danzig to discuss the situation at sea. After a report on the situation in the Baltic, the North Sea and the Atlantic, Raeder concluded that the first phase of the submarine war had ended; 232,000 tons of shipping had been sunk. Now, the large stream of merchant ships returning individually to Britain was declining and convoys were being organised. The restrictions on attacking French ships had prevented actions against *Dunkerque* and *Strasbourg*, considered the main threats to the Kriegsmarine's merchant raiders, as well as actions against the large number of convoys from Africa to France, he held. Worse, it had also prevented harassment of the troop convoys from

Britain to France, as his captains found it almost impossible to distinguish between French and British ships.

Considering, Hitler sanctioned attacks on French capital ships and merchant ships in mixed convoys or those obviously involved in troop transport. A limited mining of French ports, targeting military traffic, was also permitted. Regarding Britain, Hitler approved the torpedoing of ships unmistakably identified as British without warning as these would most likely be armed – except passenger vessels. Neutral ships were still to be treated with care to avoid indicating that things had fundamentally changed. A total blockade of Britain would inevitably involve the Luftwaffe and was deferred to later meetings.[6]

In early October 1939, the Kriegsmarine was asked by the OKW for its opinion on three options: a land offensive in the west; a siege of Britain, keeping the land war idle; and a defensive war on land and at sea, limiting offensive operations and focusing on political and industrial expansion. It was fairly obvious that the Luftwaffe would favour the two former options, while the army would prefer a land offensive. The SKL, on the other hand, concluded that for the navy, the attack on France would be 'secondary' (*Nebenfrage*) and a 'siege of Britain' (*Belagerung Englands*) was the only alternative that would give the Kriegsmarine a role to play and priority of resources. It was clear that a compelling set of arguments would be needed to convince Hitler and the OKW of the strategic necessity to pursue such a development of the war.[7] In a memorandum from the SKL to Raeder, it was concluded that:

> the British methods of economic warfare oblige the German authorities to create determined defensive and offensive fronts and to adopt the same type of brutal economic warfare. […] The navy, above all, must execute the operations dictated by the economic warfare [and] the defensive task of protecting our own supply lines falls unmistakably within the realm of economic warfare.[8]

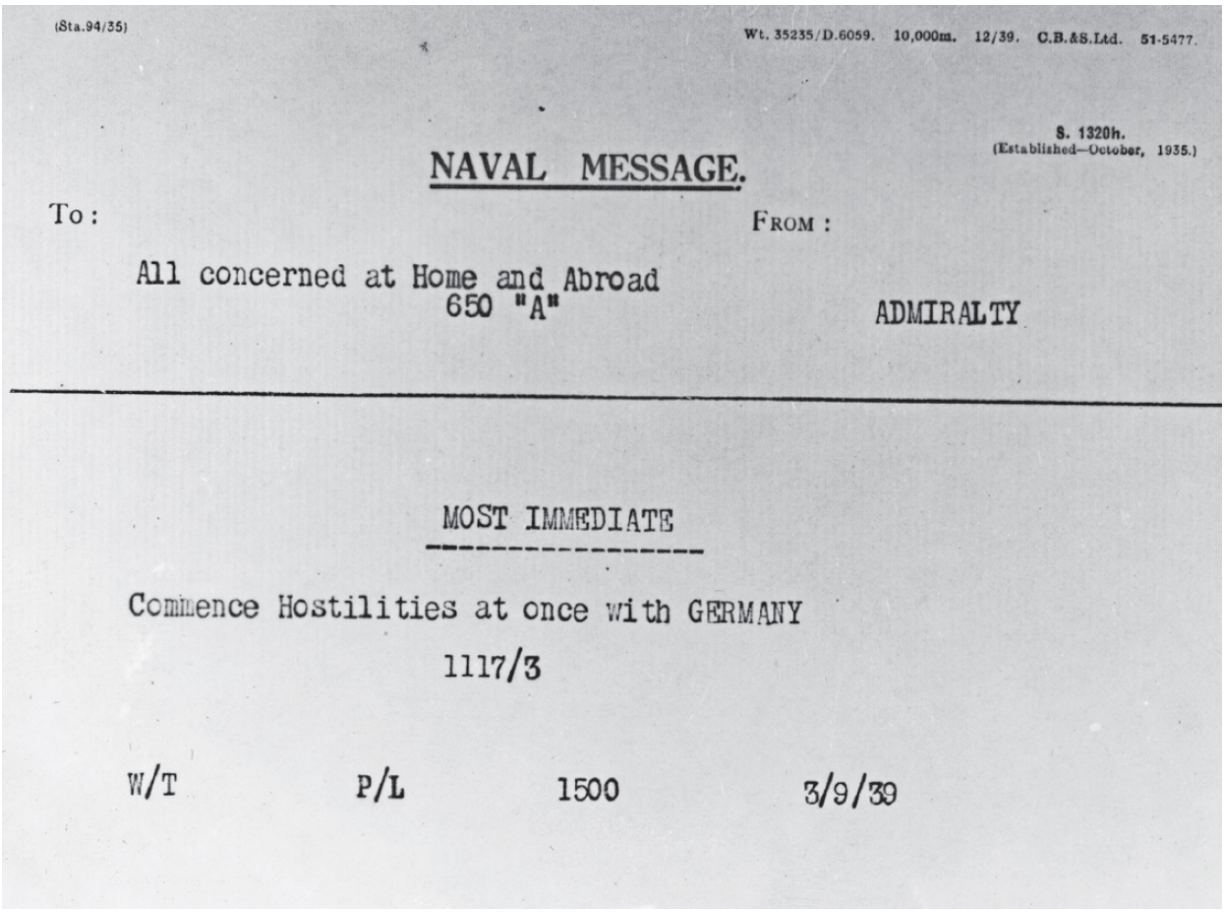
Coupled with the lack of a clear, offensive naval strategy in the OKW, such thoughts would inevitably constrain the activities of the Kriegsmarine.

Except for the siege-of-Britain concept, focus during the first period of the war was largely on tying down British naval forces in the North Sea to make room for the Atlantic raiders.

In a meeting with Hitler on 10 October, it was agreed that the siege should be enforced as much as practically possible. Objections from the Ministry of Foreign Affairs and other civilian institutions were to be ignored, as were those from the neutrals, including the USA. Now was the time to become callous. Again, Raeder emphasised that such efforts would need increased U-boat construction, but, as before, he could not secure any additional resources and would have to prioritise within those already allocated to the navy.[9]

Total Germany

On 3 September, two signals were issued from Whitehall in London to all British naval units. The first was timed 11:17 and read ‘Most Immediate: Total Germany’, which in plain language translated to: ‘Commence hostilities at once with Germany’.[10] On board the destroyer *Imogen* in the Mediterranean, Commander Alastair Ewing put his thoughts to paper:



(Sta.94/35) Wt. 35235/D.6059. 10,000m. 12/39. C.B.&S.Ltd. 51-5477.

S. 1320h.
(Established—October, 1935.)

NAVAL MESSAGE.

To: All concerned at Home and Abroad
650 "A"

From: ADMIRALTY

MOST IMMEDIATE

Commence Hostilities at once with GERMANY

1117/3

W/T P/L 1500 3/9/39

Deciphered Admiralty telegram issued to all units at 11:17 British time on 3 September 1939. (E Skjold collection)

At 11 a.m. our ultimatum to Germany expired and we were at war. This called for champagne, not to celebrate but to mark the occasion. I was rather glad it had come. There could be no other honourable course of action and during the whole of these last few days, I have had the uncomfortable feeling that our politicians were striving desperately to find an easy way out, like Munich. But it is certainly fighting for an ideal and it will not be easy to bring any immediate aid to Poland. Italy is apparently not coming in, which simplifies our job at sea 100%.[11]

The second signal, a few hours later, read simply: ‘Winston is back’. The sixty-five-year-old Winston Churchill had been reappointed First Lord of the Admiralty by Chamberlain and offered a seat in the War Cabinet, both of which he immediately accepted.[12]

Churchill hastening to war on 5 September. (Author’s collection)

Churchill had been a back-bencher for quite some time and was largely considered a ‘has-been’ by 1939. It is to Chamberlain’s credit that he asked Churchill, who had been one of the harshest critics of his appeasement diplomacy and slow rearmament, to join the War Cabinet – even if it undoubtedly carried an element of curbing an opponent by giving him responsibility. Impatient and never one to hide his opinion, Churchill would be a challenge to his fellow Cabinet members. Unlike most of his colleagues, he had been to war; personally in South Africa and France, but also as First Sea Lord and minister of munitions during WWI. He had a solid understanding of the demands that would be placed on him and the other Cabinet members in the time to come. His influence over the British government in general and development of the war in particular in the early phase can hardly be exaggerated.

Though controversial and even disliked by some, Churchill was in general warmly welcomed back by the navy – largely for his naval competence, but also for his zeal and charisma. The Royal Navy would not be left in the wake of the other services while he was in office. Nevertheless, his hands-on mentality created additional work for his subordinates and diverted sorely needed resources from mundane everyday naval work to schemes that often came to nought or proved failures. Also, his habit of working late wore down many a lesser man in his staffs and sometimes gave rise to contradictory orders and unnecessary losses.

Between September 1939 and April 1940, Churchill mostly shared the common view that Britain and France would eventually prevail through German military strength being wasted in northern France, while German industry’s ability to sustain the war would be stalled through maritime blockade and aerial bombardment. Despite pleas from his senior naval advisers to increase the pace of capital ship construction, Churchill did not push the navy to the head of the queue for resources. Instead, he acknowledged that the army and air force were in desperate need for

priorities, as was the merchant fleet. Beyond accelerating ongoing construction as much as possible, this meant few additional orders and no increase in the number of battleships, carriers, cruisers or even A/S escorts, beyond what had already been approved.[13]

Utilising existing resources, it became necessary to plan air and sea operations that would neutralise the surface ships of the Kriegsmarine and then release the capital ships for stations where they would deter Italy and Japan from taking advantage of the situation. Meanwhile, Asdic-equipped escorts and hunting groups would take care of the U-boats, it was believed. With France in the war, the Channel could be closed and German U-boats and surface raiders would have to pass through the northern North Sea to get into the Atlantic, giving the Royal Navy and Royal Air Force a supreme advantage. Denying Germany access to French ports through assisting the French Army on the Western Front and working in an effective alliance with the French Navy on the seas would be the best recipe for keeping Britain's sea lanes open. The French Navy alone was bigger than the Kriegsmarine, and Churchill believed that there was every reason to use the combined Allied navies in a strategic offensive. The lack of systematic aerial reconnaissance and signals intelligence would seriously hamper the use of the superior Allied forces, however, as would the acute lack of escorts and A/S vessels.[14]

Once the War Cabinet had been established, the secretaries of the Cabinet and the CID were merged into a single body known as the War Cabinet Secretariat, with a civilian and a military branch.[15] The War Cabinet was purposely kept small and its members largely free of departmental responsibilities so that they could focus on winning the war in the shortest possible time. Most of the detailed planning and analysis work would be done by sub-committees, and an outer tier of ministers and civil servants would, together with the Chiefs of Staff (CoS), be available to advise and consult as necessary.

The Admiralty, as the War Office and CID, reported to the Cabinet while the Chiefs of Staff Sub-Committee, consisting of General Edmund Ironside, Chief of the Imperial General Staff, First Sea Lord Admiral Pound and Air Chief Marshall Cyril Newall, reported through the CID to the Cabinet. The CoS, their deputies and the chiefs of the Joint Planning Committee and the Joint Intelligence Committee became the primary advisers to the British government on defence policy. Their collective opinion and advice to the Cabinet was usually stated through the chairman – Newall in the period covered by this book – but was often clouded by infighting and lack of inter-service cooperation. Each of the Chiefs of Staff filled a dual role – being individual and collective advisers to the War Cabinet as well as serving their respective ministers – which made them consistently overworked.

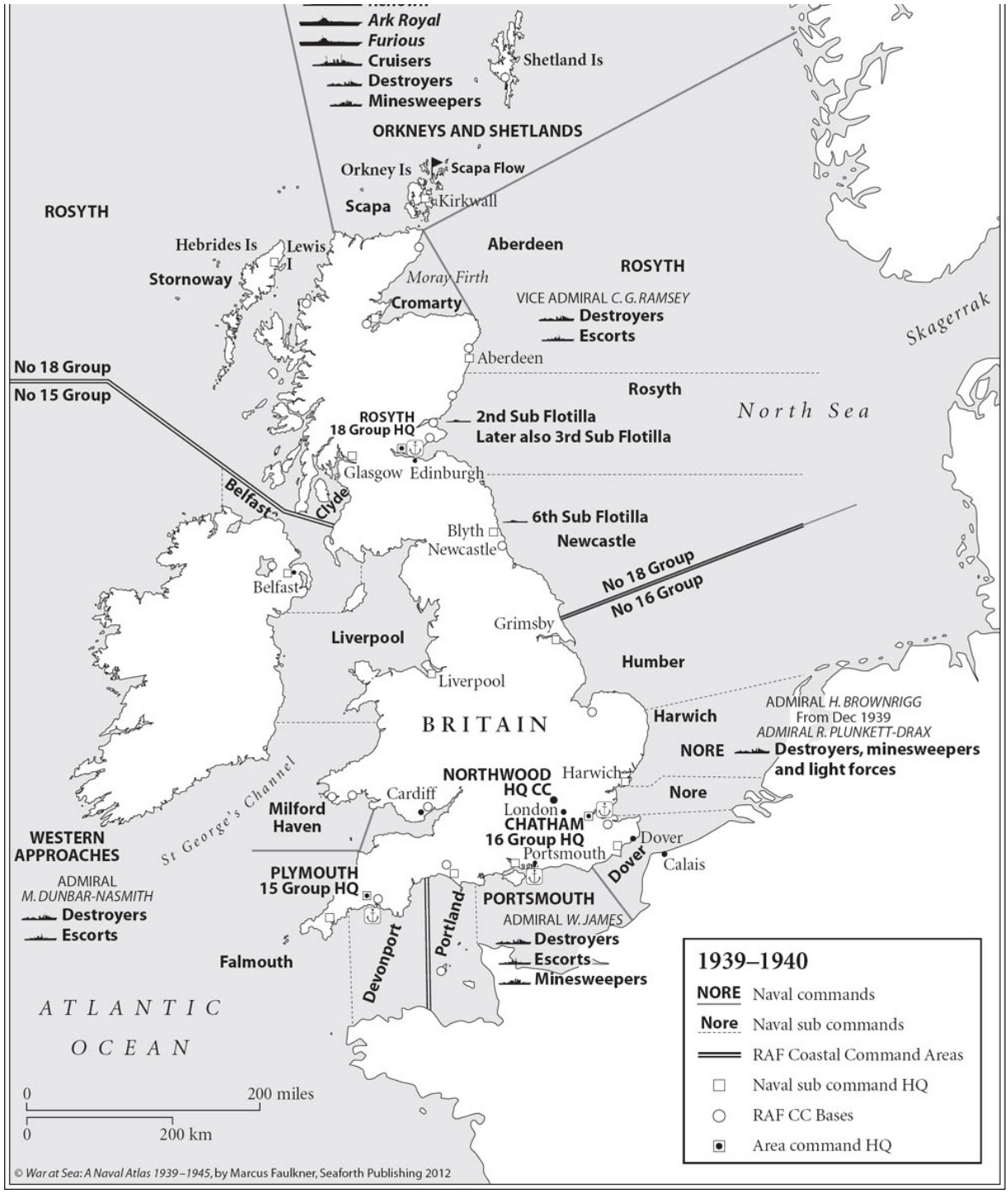
Two inter-service bodies, the Joint Planning Sub-Committee and the Joint Intelligence Sub-Committee, advised the CoS; each of them comprising one or more officers from the three services, holding executive posts in their own department. The Joint Intelligence Sub-Committee had a representative of the Foreign Office as its chairman. To lessen the burden of administering the war, the Cabinet established the Standing Ministerial Committee on Military Co-ordination in October, headed by the Minister for Coordination of Defence, Admiral Chatfield, and including the three service ministers but no representative of the Foreign Office. This ensured that all crucial questions were dealt with properly – by the CoS, the Co-ordination Committee and the War Cabinet proper – but it did not favour swift, decisive assessments and quick decisions. The system suited the cautious Chamberlain but annoyed Churchill to the degree that he had it modified later in the war.[16]

At the outbreak of war, five battleships, two battlecruisers and one aircraft carrier were assigned to the Home Fleet, as were four cruisers at

Scapa Flow and two at Humber. The cruisers of the 12th and 7th Squadrons were also at Scapa Flow, but used exclusively on the Northern Patrol.[17]

Two destroyer flotillas, the 6th and the 8th, were allocated to the Home Fleet, totalling seventeen ships. The 7th Flotilla, still incomplete, had already proceeded to its war station at Dover on 25 August. The K-class destroyers that were to have formed the 3rd Flotilla and relieve the I-class in the Mediterranean were instead ordered to form the 5th Flotilla and join the Home Fleet as they were completed from October 1939. The 3rd and 4th Flotillas, I-class and Tribal-class respectively, returned from the Mediterranean, and, after brief service in the Western Approaches and East Coast Convoys, joined the Home Fleet in October/November. Four I-class ships were withdrawn, converted to minelayers and formed the 20th Flotilla. In early 1940, the arrival of the 2nd Flotilla from the South Atlantic brought the total number of destroyers with the Home Fleet to forty-nine in six flotillas. The large amount of sea-time per ship in poor weather during the autumn and winter of 1939/40 resulted in unexpected wear and maintenance requirements, however, and at any one time a number of the destroyers would be in the yard for repair, maintenance or refits. The flag of Rear Admiral (D) flew from the cruiser *Aurora* until December 1939, at which time it was transferred to *Titania* and later in the month to *Woolwich* at Greenock.[18]

On 11 November, four cruisers, four Tribal-class destroyers and the 7th Destroyer Flotilla were detached under Vice Admiral 2nd Cruiser Squadron George Edward-Collins to make up the Humber Force, operating under Admiralty orders.[19]



In general, the forces from Scapa Flow operated in the northern waters, including convoy escort to and from Scandinavia, A/S patrols in the Fair Isle Channel and searching for German ships attempting to pass through the Bergen–Shetland Narrows or the Faeroes–Iceland–Greenland Passage. The

Rosyth Escort Force, consisting largely of V&W-class destroyers and sloops, took convoys up and down the coast. The Humber Force, based at Immingham, near Grimsby, covered the east coast of England, including invasion defence.

The destroyers of the Home Fleet, when not in direct support of the capital ships, were used as much as possible in the A/S role and convoy escort. They soon proved alarmingly vulnerable to aircraft attack and poorly equipped to fight back against anything but surface vessels. Even taking on the U-boats turned out to be a bigger challenge than anticipated.

During the autumn of 1939, atrocious weather followed by severe frost with heavy ice conditions slowed the naval war. At times, smaller ships had to concentrate just on surviving; some of the British destroyers with captains reluctant to slow down in the face of the weather suffered structural damage. *Impulsive* was one, *Kelly* another, resulting in time in the yard and cautions from the Admiralty. The rudders of *Rodney* and *Nelson* as well as the cruisers *Glasgow* and *Southampton* were damaged, apparently from a weak design that rendered them incapable of withstanding the strain of continuous zigzagging in rough seas. Several ships suffered from leaks, especially the destroyers, and time spent in the yards increased.[20]

Control of the French military was in the hands of the Council of Ministers. In September 1939, Édouard Daladier was president of the council (prime minister) as well as minister of national defence and minister for war. His chief military advisers were General Maurice Gamelin, C-in-C of the Army and Chief of Staff for National Defence, General Vuillemin, the air force Chief of Staff, and Admiral Darlan of the navy.

As a precaution, all French ports were closed in the morning of 1 September. When it became clear the next day that Italy would not join the war at this stage, the Mediterranean ports were reopened and coastal traffic permitted. The western ports and thus all transatlantic traffic remained suspended until the 5th, when war had been declared and the whereabouts

of the German fleet had been ascertained. Merchant ships in the Mediterranean were allowed to sail independently along approved routes, while in the North Sea and the Atlantic, French ships would be subordinated to the British convoy system. Most of the French naval resources in 1939 and early 1940 were deployed protecting their own troop convoys from Africa to Marseille.

The first casualties of the Marine Nationale occurred on 13 September. The mine-laying cruiser *Pluton* had been sent to Casablanca to lay a defensive minefield off the West African coast. The order was cancelled and *Pluton* ordered back to disembark the mines, which had already been armed. One of them exploded, destroying the ship and killing 215 officers and men. A further 120 were injured, of whom forty-seven were harbour personnel.[21]

To ensure a more flexible use of the French ships, Churchill and Pound visited Maintenon in September to meet with Admiral Darlan. It was agreed that, in addition to helping protect the steady stream of British troops transported across the Channel, the Marine Nationale would participate in the escort of certain Atlantic and Gibraltar convoys as agreed from case to case.[22] In return, Asdic-equipped trawlers would be provided as well as general A/S and mine-sweeping competence. The mistrust between the two allies ran deep, though, and it would be well into 1940 before any direct cooperation between the navies started to develop.

Also in September, Chamberlain and Daladier agreed to establish an Anglo-French Supreme War Council (SWC), to oversee the joint military strategy on which France and Britain should base the war against Germany. Each country should be represented by its prime minister and such counsellors as they decided to bring. The council would have no executive authority, and final decisions remained with the two governments. At the two first meetings of the SWC, in Abbeville on 12 September and Hove near Brighton on 22 September, France persistently argued for action

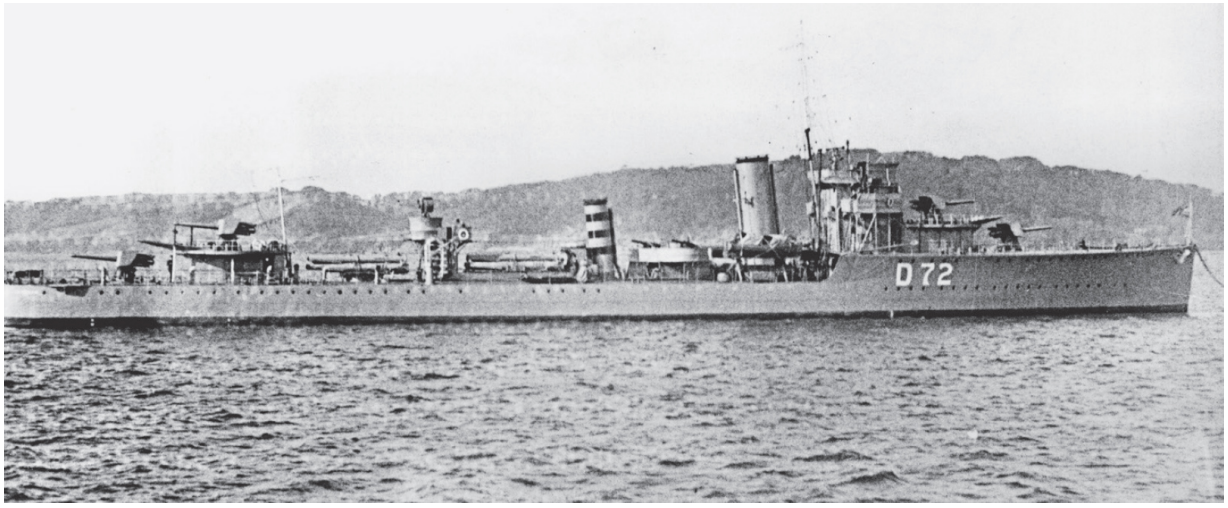
elsewhere. The British delegation, on the other hand, shrank from measures that might mean an escalation of the conflict, especially into the Mediterranean. Soon, other differences emerged too, in particular as the influence of the military leaders started to grow beyond that of merely advisers to the politicians. Above all, the issue of Scandinavian neutrality in general and assistance to Finland in particular was to sour the Anglo-French relationship profoundly.[23]

In September 1939, the Royal Navy could muster a little over 130,000 officers and men, including 12,400 Royal Marines who, in addition to delivering police duties and landing parties, handled every fourth turret on the larger ships. To man the ships of the Reserve Fleet – some 130 vessels of all sizes – an additional 80,000 men of the Royal Naval Reserve (RNR) and Royal Naval Volunteer Reserve (RNVR) had to be mobilised. The RNR were largely professional seamen from the British merchant navy and fishing fleets or retired naval officers and ratings who had completed their first twelve-year engagement but not re-enlisted.[24] The RNVR were amateurs who had volunteered for basic training.

In mid-June 1939, the first officers and men of the RNR were called up and in late August a general mobilisation of the navy was ordered including the RNVR and 'hostilities only' ratings. In addition, a restart of the Women's Royal Naval Service (WRNS, affectionately known as Wrens), which had been abandoned after the previous war, was initiated, freeing up a significant number of men for active service. By midsummer 1939, a slow but steady re-manning of the ships of the Reserve Fleet was in progress. Few of the 'hostilities only' ratings had any connections with the navy at all and needed an extensive period of training before they could even be considered for war. In some of the new ships the majority of the men and officers had not served, far less served together, in a setting of war. This put a huge strain on the officers and NCOs, not least those of the RNR, who in increasing numbers were given command of the smaller vessels, sloops,

corvettes, minesweepers, trawlers and auxiliaries.[25] Commander Jack Broome of *Veteran* wrote:

I commissioned the vintage destroyer *Veteran* from Reserve at Chatham and a veteran she surely was, built shortly after World War I. […] My raw crew and their raw skipper were going through that harsh, vicious change-over from peace to war; adapting ourselves to the current technique of defending our vital merchant navy which, except for the advent of air power, was back to where the last war ended. […] The magic of radar, for example, was entering our lives, complete with teething troubles. Seamen – who had never been to sea – were trained to operate it. The buzz got around that crossing the beam with the instrument switched on would make them impotent. Came rough weather, less superstitious operators promptly put paid to their precious instruments by being sick into them. Emergency signals went forth both to refute the impotence scare and telling the Medical Research to drop the pill they were working on to keep Wrens out of trouble and get cracking on one to stop radar operators being seasick. And so on. A different war with different problems, but the same old tussle with human imperfections.[26]



Destroyer *Veteran* of the Reserve Fleet. (World Ship Photo Library)

Gunnery practice and torpedo-firing was lacking, in particular for the destroyers, and tactical operations such as U-boat hunting had to be learned the hard way. Soon, however, the well-oiled machinery started to work. Admiral William James, C-in-C Portsmouth, wrote in a letter to a friend on 9 September:

I take my hat off to those who planned for this war. Everything seems to have fallen into place. The boom, an immense structure, is in place with its gate vessels, the examination service is functioning and the inner patrol, a kind of water police service, is in being. The safe passage of the Army to France is my main commitment. I've got some destroyers for escorting the troopships which load at Southampton. The accurate 'buttoning up' of the troopships and escorts is a daily task for the staff, who so far have done remarkably well. I was at the barracks during the mobilisation. I wish you could have seen that perfect example of good organisation. Everything has been thought out.[27]

There were several stark reminders that the sea was as dangerous as ever. In December, the battleship *Barham* was called back from the Mediterranean to the Home Fleet and at 04:00 on 12 December she and her escorting destroyers were 9 miles off Mull of Kintyre, in the North Channel, a few hours out from Greenock. It was time for another zigzag, and A/S Officer Lieutenant Reginald Whinney was on watch on board the lead destroyer *Duncan*:

At the vital moment, I went to the back of the bridge to watch the other ships of the screen through binoculars, especially those ships on the outside of the turn. Suddenly, in the middle of the manoeuvre, *Barham* switched on her navigation lights. Then she switched on a searchlight. In the beam was, apparently, a submarine. The assumption was that the battleship had rammed a U-boat. At first, no signal was made to say what had happened. Then came a signal from *Barham* telling us to pick up survivors. The Captain was, of course, on the bridge by this time, so I, as First Lieutenant, went down to lower a boat to pick up survivors from a U-boat – or so I thought. As the boat was being lowered there were several loud explosions. There must be a second U-boat which had fired torpedoes and hit *Barham*. As an immediate reaction, I thought we should release a life-saving raft for the survivors for the time being and seek to attack this supposed second U-boat. […] Then, with horror, I realised that it was the red anti-fouling on the bottom of a destroyer and that the imagined conning tower was, in fact, the asdic dome.[28]

Indeed it was. For reasons never fully established, the destroyer *Duchess* had got in the way of the battleship and been rammed and capsized. A few seconds' lapse in alertness and the unthinkable had happened. Casualties were heavy: 137 men, including Lieutenant Commander Robin White, perished. Most ratings were below; those not sleeping were having breakfast or clearing away their gear in order to be able to leave early once they arrived in port. The massive bulk of the battleship hit the nimble destroyer with such tremendous speed that she simply turned over, trapping most of the crew within the hull. Many of those who got into the water were either killed by exploding depth-charges or succumbed to the freezing cold of the sea. Few had found the time to grab lifebelts. Only twenty-three men were saved.

Two weeks later, on 28 December, *Barham* was torpedoed by *U30* west of the Butt of Lewis. At the time, the battleship was in the company of *Repulse* and four destroyers, *Inglefield, Imogen, Icarus* and *Khartoum*. No torpedo tracks were seen. The torpedo hit on the port bow abreast the 'A' shell room. Four crewmembers were killed. *Barham* stopped and reversed her engines, making a W/T signal that she had hit a mine or been torpedoed. At the same time, a signal was hoisted, but this was incorrect and no immediate search for the U-boat was initiated. By the time the signals had been corrected, Kapitänleutnant Lemp had taken his boat away and no counterattacks were experienced. In spite of extensive flooding, *Barham* was able to proceed under her own power to Liverpool, where she stayed in the yards until June 1940.[29]

Intelligence

Reviewing the general situation at the end of October, the CoS concluded that in their opinion, the only field in which the Allies could take any offensive initiative at the moment was in the economic warfare at sea, combined with diplomatic and financial pressure. This assessment was

partly based on the actual strength of the Allied armed forces, partly on an analysis of the economic situation in Germany prepared by the Industrial Intelligence Centre of the Department of Overseas Trade in April 1939. The Ministry of Economic Warfare (MEW) believed there to be a shortage of skilled labour in Germany as well as of raw materials such as iron, chrome, nickel, copper, tin, rubber and petroleum. In addition, a major part of German industry was concentrated in the Ruhr–Rhineland–Saar area, within reach of Allied aircraft and an eventual land offensive, should that be decided on. The treaty with Russia, it was believed, would only to a minor degree be able to make good these deficiencies.[30] Until one of the parties decided the time was right to open the Western Front, it would be a naval war and its strategies would to a large extent be determined by intelligence. Unfortunately, both intelligence and operational analysis had received low priority in the interwar years and become something of a backwater. In particular naval intelligence was inadequate and fragmented at the outbreak of the war.

Coordinated acquisition of information from reliable sources was rare in Britain and the exchange of analysis and interpretation between departments and services almost non-existent. Worse, German naval communication was for all practical purposes closed to interception. On 12 January 1940, C-in-C Home Fleet Admiral Forbes, with reference to the confusion over who sank the *Rawalpindi*, complained with open resentment that 'some improvement should be made in the intelligence' forwarded to him regarding the whereabouts of German naval vessels: 'The only intelligence I receive at present is the "Daily Summary of Naval Events" and "OIC, Daily Report" sent by post and therefore anything from 2 to 14 days old.'[31]

The main intelligence unit of the Admiralty, the Naval Intelligence Department (NID), was led by the director of naval intelligence (DNI), Rear Admiral John Godfrey. NID had been hit hard by the cuts in the naval

budgets in the 1920s, but Godfrey had been able to reverse this trend, and an Operational Intelligence Centre (OIC) had been established in 1937, led by Rear Admiral Jock Clayton. The OIC's main task was the maintenance of tracking plots, incorporating all available information on the whereabouts of German naval ships, on surface and below. Besides some High Frequency Direction Finding (H/F-D/F) wireless stations, known as 'Huff-Duff', the plots were based largely on sightings and reports of torpedoed merchantmen at sea, supplemented by intelligence from German or neutral ports by naval attachés, consuls, shipping officers and other observers.[32] Reports from non-military sources reached the OIC via the Foreign Office, while sighting reports from ships and aircraft arrived via the so-called War Registry, the department of the Admiralty that distributed signals.[33] In addition, Lloyds, the Board of Trade and the Baltic Exchange routinely submitted information on German ship movements. Aircraft reconnaissance was still in its infancy and would only become truly effective towards the end of 1940. To distribute the flow of intelligence quickly, the OIC was authorised to communicate directly with naval forces at sea if considered necessary.

In general, the NID was not overly successful in the first part of the war. The OIC was under-resourced, inexperienced and poorly equipped and hampered by a disruptive state of competition and mistrust between the OIC and NID 1, the geographical section of the NID covering Germany. Inter-service communication and cooperation regarding intelligence and its analysis was virtually non-existent in Britain at the beginning of the war.[34]

The Government Code and Cypher School (GC&CS) at Bletchley Park, which would later become instrumental in the outcome of the war through outstanding signals intelligence and cryptanalysis, had been set up as an inter-departmental body responsible for acquiring intelligence by means of cryptanalysis in 1919. In case of a new war it was intended that the analysis of readable codes and cypher should be transferred back to the service

intelligence branches while the GC&CS would work on unsolved cypher. Thus, the staffs of the GC&CS were expert cryptanalysts but not professional intelligence personnel. This would actually lead to a flexible collaboration between the GC&CS and the services later, but during its first year, a lack of experience and competence meant that the relatively new concept of Sigint or 'Wireless Traffic Analysis' was looked upon with suspicion and not understood by most staffs and senior officers. Eventually, the keys of the German Enigma code-machines would become available to the GC&CS but for all practical purposes, the Kriegsmarine codes remained impregnable to British intelligence until the second half of 1940.

Photographic reconnaissance had been all but ignored by the RAF in the inter-war years and had to be reinvented. Suitable aircraft types were scarce, the cameras and film in use were generally unsuitable and in those instances where good photographs were actually taken, there were few if any trained interpreters to analyse them. In the weeks before the outbreak of war, the Secret Intelligence Service (SIS) had fitted the private Lockheed aircraft of businessman Frederick Sidney Cotton with hidden cameras to photograph German airfields, naval installations and ships on his flights to and from Germany. After war had been declared, Cotton and his small staff were incorporated into the RAF as 1 Photographic Reconnaissance Unit (PRU) at Heston aerodrome. At first, Blenheims of Bomber Command were used to fly photographic reconnaissance sorties, but inadequate performance resulted in heavy losses. Civilian aircraft were pressed into service, but it was not until two stripped-down Spitfires could be made available in November 1939, that PRU could begin anything like proper operations over western Germany. The first aerial photographs of Kiel were only taken on 7 April 1940.

The interpretation of the aerial photos, every bit as important as taking them, lagged even further behind, and it was not until July 1940, after pressure from the Admiralty, that the Air Ministry set up the Photographic

Interpretation Unit (PIU) to interpret photographs for all three services and to start harvesting its real operational value.[35]

On the German side, things were far more advanced. For over ten years after WWI, the radio monitoring service or B-Dienst of the Kaiserliche Marine lived its own life, monitoring technological development and code breaking until October 1929, when it once again became part of the navy and was moved to Kiel. Much of its work was devoted to the creation of new cyphers and codes and it was in this period that the Enigma machine emerged. In the late 1930s, the B-Dienst was brought to Berlin as part of the Office of Communications and Intelligence. The staffs were increased and also tasked with collecting naval information from foreign press, public sources and German connections around the world.[36]

Two chains of coastal radio stations were developed during the early 1930s: one for the North Sea on the Frisian Islands, equipped with receivers, transmitters and radio direction finders and one for the Baltic along the German east coast. Bearings obtained on transmissions by two or more radio stations could be triangulated to obtain a fairly accurate position depending on the strength and quality of the signal. By 1939, the stations were equipped with state-of-the art receivers and radio direction finders as well as communication tools for interception, location and intelligence analysis, far superior to anything available to the Allies.[37]

The B-Dienst and its decryption service, the xB-Dienst, could at the outbreak of the war read and decypher a significant amount of encrypted Allied radio communications, including the most widely used code of the Royal Navy. The B-Dienst operators could on a routine basis monitor the positions of all British warships; their recognition codes and a large part of the signals they sent between themselves and between the Admiralty and the various C-in-Cs were understandable. Decrypting and dispersal of the information took time, though, and could not always be acted on in time to make a difference. It is clear from the war diary of the SKL and BdU

(Befehlshaber der Unterseeboote – C-in-C Submarines) that even if the signals themselves could not be read in full, the B-Dienst could on an almost continuous basis monitor the whereabouts of most British and French capital ships and cruisers in the North Sea, Atlantic and Mediterranean. Signals to the British merchant navy were to a large extent transmitted in plain language long after the outbreak of the war, and it was not until January 1940 that the British introduced the Merchant Navy Code.[38]

German military intelligence in the first phase of the war was handled by the OKW/Amts-gruppe Auslandsnachrichten (Bureau of Foreign Intelligence), usually known as the Abwehr. It was led by Admiral Wilhelm Canaris, a firm German patriot but no friend of Hitler and his Nazi Party. Based on a counter-espionage organisation founded in the 1920s, the Abwehr had lived a clandestine life under various guises until it was brought directly under the OKW in 1938, giving Canaris unprecedented influence. Within the Abwehr, Group I handled military and economic intelligence, Group II sabotage and Group III counter-intelligence. Every morning at 10:00, Admiral Canaris and his Chief of Staff Colonel Oster met with the group leaders to hear their reports and give instructions. Thus the leaders of the Abwehr were well informed of what went on in the bureau as well as in the OKW and the Foreign Office.[39]

— 6 —
German Home Waters

Operation Catherine

In Churchill's mind, a naval expedition into the Baltic, in alliance with the Soviet Union, would open the door to Germany's back, diverting forces from the Western Front and severing the iron ore supplies from Sweden. By the time he returned to the Admiralty, though, Germany was about to secure the southern Baltic coastline with the Soviet Union as an ally. Nevertheless, Admiral of the Fleet Lord Cork and Orrery, an old friend of Churchill, was given the task of preparing Operation Catherine, a 'forced passage into the Baltic'.[1] A substantial naval force was foreseen: three Revenge-class battleships, an aircraft carrier, five cruisers, two destroyer flotillas, submarines and supporting auxiliaries. Once inside the Baltic, the use of Swedish bases was taken for granted. Pound and most of the Admiralty expressed strong doubts from the start. The resources were needed elsewhere and the ships sent into the Baltic would in all likelihood be lost, weakening the Royal Navy at a time when this could not be afforded. During the winter, Churchill gradually lost his enthusiasm for the plan as he realised that he could rely on neither Swedish bases nor Russian cooperation. Instead, he decided that a strong force of submarines should be prepared to enter the Baltic should an opportunity arise. All plans were eventually cancelled when Finland capitulated in March 1940.[2]

Extensive Mine-laying

On the conclusion of the Polish campaign, three main tasks were defined by the SKL for Naval Group East: securing the Kattegat and the entrances to the Baltic against Polish submarines that might still be inside and British ones that might attempt to enter, controlling commercial shipping to prevent contraband to and from Finland and the Baltic, and securing the sea lanes between Germany and East Prussia. Admiral Carls took charge in the east on 31 October when Generaladmiral Albrecht retired. Vizeadmiral Hermann Mootz was responsible for the minefields and other defensive measures as C-in-C Security, Baltic (Befehlshaber der Sicherung der Ostsee – BSO). After the Polish campaign, the minesweeper forces were split into an eastern command under Kapitän Ruge in Swinemünde and a western command under Konteradmiral Hans Stohwasser in Cuxhaven, reporting to the respective eastern and western Naval Group Commands.[3]

The first German minefields in the Baltic were established in the early morning of 4 September. A total of 564 mines were laid by *Hansestadt Danzig* and *Tannenberg* south of Trelleborg in Sweden, closing off the northern part of the exit from Øresund. At the same time, *Brummer*, supported by *M75*, *M84* and *M85*, laid a similar but smaller field closer to Denmark. *Tannenberg* augmented the fields the next day, closing them towards Danish and Swedish territorial waters. These fields were known as Undine I, II and III respectively, and were later further enhanced by A/S mines. South of the Great Belt, *Preussen*, fresh off the yard after conversion to a minelayer, laid 136 mines on the 4th in the field Grosser Bär off the Danish island of Langeland.

Admiral Rolf Carls (*left*) in charge of Marinegruppenkommando Ost – Naval Group Command East. With him is Korvettenkapitän Karl-Friedrich Brill of minelayer *Cobra*. (Author's collection)

These mining operations were extremely efficient in spite of most men and ships being new to the trade. Undine I and II were laid in 90 minutes, the two rows of Grosser Bär in 80 minutes. In the following days, the latter field was augmented by the stripes Jade-5 and Jade-6 off Lolland, two A/S minefileds south (Jade-3 and Jade-4) as well as two A/S nets off Falster (see map opposite).

The German minelayers had their ordnance lined up on two tracks, one on each side, going over the stern aft. This made it easy for the pilot and the captain to focus on keeping course and speed while the mining officer ensured the mines were dropped at regular intervals, even in a heavy swell. An unexpected challenge was that the maps had inaccurate depth annotations, and each mine-laying operation had to be preceded by a calibration survey to ensure the anchors were pre-set correctly so the mines ended up at the right depth.

The 3,933-ton Greek steamer *Kosti*, en route from Leningrad to Antwerp with props, ventured into the Grosser Bär Field in the morning of the 4th, before appropriate warning had been set up, triggering a mine. The load of props kept the freighter floating for a while and the crew took to the boats, eventually landing near Malmø. Late in the evening of the same day, the small German 250-ton motor schooner *Lianne* also entered one of the minefields, sinking with all five of her crew being lost. To prevent further accidents, pilot boats were stationed on each side of the fields with knowledge of safe routes through the danger areas. This resulted in a certain amount of queuing to get through, but after a while routine prevailed and procedures were normalised. Strong tides, storms and faulty anchoring would often set mines adrift, though, and ships were frequently lost even in areas considered safe. Few mines became inert as they were supposed to when off anchor, and drifting mines represented a constant danger in the Belts and the western Baltic. The auxiliary *V701 Este* was lost due to one or more such drifters in Faxe Bay on 21 October. On 25 November, the same

fate struck *V301 Weser* in the Great Belt. Also in November, the German destroyer *Bernd von Arnim* and the cruiser *Köln* were prevented at the last moment from sailing into a Danish minefield through frantic signalling from the guard vessel. Both captains later held they had not received any information from either Danish or German authorities regarding the mines.[4]

Adapted from Bachmann, *Die Deutsche Seekriegführung in der Ostsee nach Ausschaltung der Polnischen Marine im Herbst 1939*.

Following the Molotov–Ribbentrop Pact announced on 23 August, the Swedish government, at a request from the General Staff, called up the naval reserves, manning ships, staffs and signal units, and initiating patrols along the territorial boundary. This resulted in a number of confrontations between Swedish escorts and German patrols. In a few cases shots were fired. There were no casualties from these events, but six Swedish sailors were killed in December when a German cable-cutting device found drifting exploded when retrieved.[5]

To facilitate their own coastal traffic, Sweden unilaterally declared a 4-mile neutrality zone, accepted by neither Germany nor the Allies. At first, the German minefields were placed up to, but not across, the Swedish 4-mile limit. To keep Swedish ships clear of the minefields, several channels were regularly swept inside the territorial limit and marked with light buoys. Soon these channels were also used by neutral shipping to avoid German interception. Hence, a request was made by the SKL to the German Foreign Office on 15 September to notify Stockholm that the 4-mile territorial limit declared by Sweden could no longer be recognised, only the normal 3-mile zone. This would force most merchant ships outside Swedish waters at a number of places, making them accessible for German inspection. The Foreign Office was at first unwilling to abide and it created tension between the two departments until the Swedish government was finally notified on 30 October that the minefields would be extended

towards the 3-mile limit. Protests from Stockholm were futile and, on 24 November, Swedish authorities yielded, informing German naval authorities that, as ‘a preliminary measure’, the Swedish Navy would ‘concentrate the defence of Swedish neutrality to a 3-mile zone along their coast’. This would trap most of the Swedish Navy inside the Baltic and expose all merchant traffic through the Belts to German control.[6]

Denmark declared responsibility for a 3-mile zone during the first week of September and laid its own minefields in the Belts, protecting the entrance to Copenhagen.[7] A proposal from Admiral Carls of Marinegruppenkommando Ost to close the Belts completely through a huge minefield from Ebeltoft to Sjellands Odde with a single opening, easily controlled by a handful of guard ships, was rejected by the SKL as it would have had to include Danish waters to be effective. It was feared that the British would use such an infringement of Danish waters as an excuse to start dropping mines from aircraft in the eastern waterways.[8]

Commerce Warfare

As soon as the initial minefields had been laid and the Polish Navy defeated, the Kriegsmarine started preparations for control of the commercial traffic in the Baltic. Due to the priorities in the west, there were few ships available for this task, and a multitude of ships were used during the first months. The first mission commenced on 12 September, when the destroyer *Richard Beitzen* and the old torpedo boat *T107* left Swinemünde, heading for the Kattegat. No results were achieved and both ships docked in Kiel two days later. It is interesting to note that *Beitzen* was assigned this task as she had only one engine working at the time and was not considered fully operational. Destroyers were prioritised for operations in the west and only deployed in the Baltic as an exception or on short missions.

Eventually, as ships became available, an extensive patrol system was set up to halt any traffic benefiting the Allies. Ore, timber, cellulose and

various foods were going in large quantities from Russia, Finland, the Baltic states and Scandinavia to both Britain and France and were now deemed contraband according to international law. All neutral ships were to be stopped, searched and arrested if found to have contraband on board.[9] During 1939, more than 400 ships were stopped and of these some 12 per cent were arrested and taken by a prize crew to Swinemünde, Gotenhaven or Pillau, to be assessed by a prize court.

Zerstörer Z20 Karl Galster intercepting the neutral Norwegian freighter MS *Balzac* in the Skagerrak in the autumn of 1939. (Author's collection)

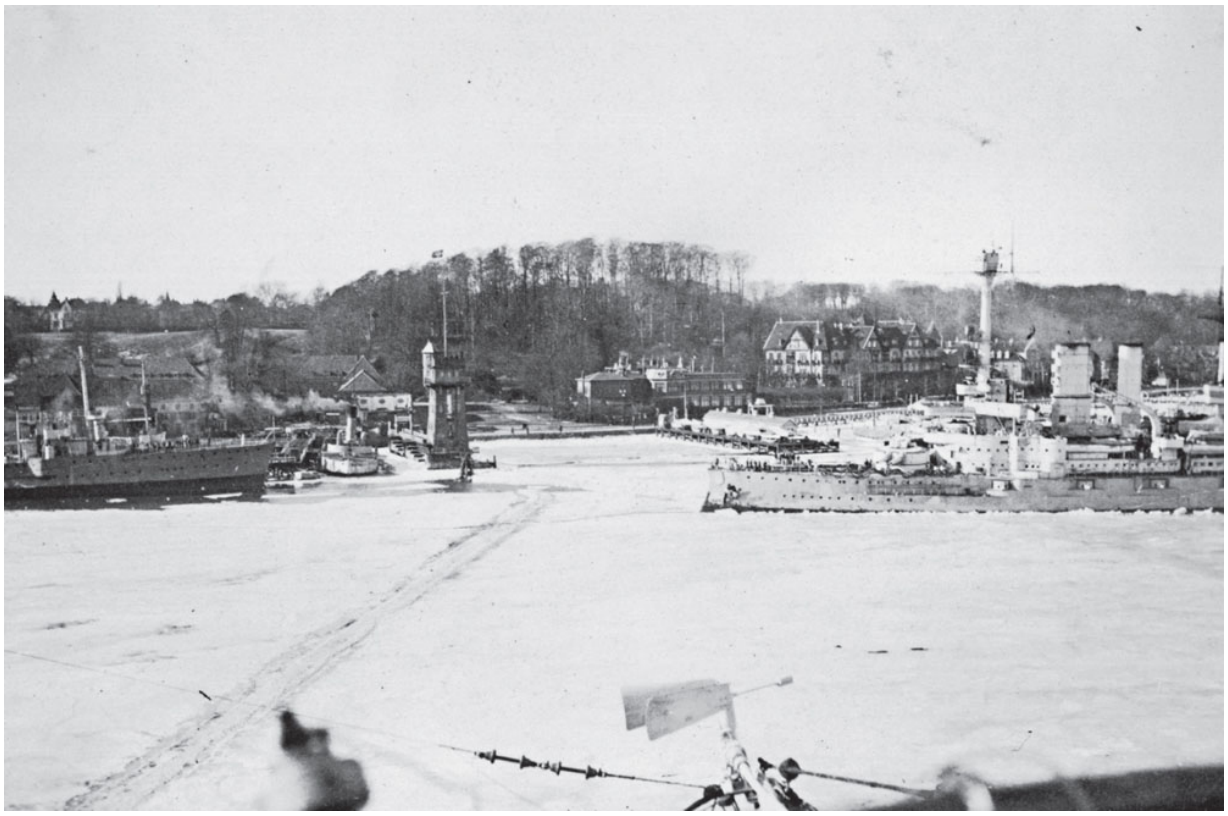
The minelayers *Kaiser, Königin Luise, Preussen* and *Tannenberg* were used on these missions, supported by torpedo boats and auxiliaries. Most of the time they were deployed off the Swedish islands Öland and Gotland, east to latitude 20 and north to Åland. Two ships were usually in the area at any one time, each patrol lasting eight to fourteen days. Traffic was substantial, and hundreds of ships were searched during the autumn until the ice halted most of the traffic towards the end of the year. At the end of September, the SKL transferred *Admiral Scheer* to Gruppe Ost as reinforcement in the war on commerce. Due to the perceived submarine threat she remained largely in the Danzig Bay, though, as there were no escorts to spare. Later, with the minefields in the west completed, *Grille, Hansestadt Danzig* and *Kaiser* were also subordinated to the eastern command and deployed for commerce war.

Korvettenkapitän Freiherr Theodor von Mauchenheim genannt von Bechtolsheim and his men on the bridge of *Karl Galster* enjoying themselves firing on drifting mines in the Skagerrak in the autumn 1939. (Author's collection)

Contrary to initial German expectations, the results of the Baltic commerce war were rather meagre. The Polish ships had escaped, and for obvious reasons there were few British or French around.[10] Of the merchant ships inspected, few carried contraband. On 29 and 30 September, for instance, of fifty-eight vessels inspected in the eastern Skagerrak by a group of seven destroyers under Konteradmiral Lütjens, only nine were sent to Kiel for further verification. Likewise, of nine merchantmen inspected in Swinemünde on 3 October, six were released the same day as only three carried goods considered contraband or had improper papers. Firstly, the list of contraband relevant for the Baltic was short – oil, coal, ore, cellulose, timber and foodstuffs. Secondly, the presence of the German warships quickly became known and merchant ships carrying banned goods chose different routes. Weather conditions also soon turned out to be a problem as it was difficult for the prize crews to get across for inspection in the rough seas.

To increase the efficiency of the operations, aircraft were added to the patrols; He59 floatplanes being particularly useful. When a merchant ship was sighted, a message bag would be dropped on the deck, instructing it to steer for a position where German inspection vessels would be waiting. In some cases, a burst of machine-gun fire underlined the instructions. In others, prize crews carried by the aircraft were rowed across in an inflatable dinghy if the sea permitted a safe landing.

From the end of October, poor weather alternating with periods of severe cold and ice reduced traffic noticeably in the Baltic. The *Schlesien* and *Schleswig-Holstein* had to be used as icebreakers to prevent it coming to a total halt.[11] The ice also restricted the working-up of new ships and crews (the cruiser *Blücher* among them) but, as many of the Kriegsmarine's ships were in need of overhaul or modernisations, the yards worked at capacity through the winter.[12]

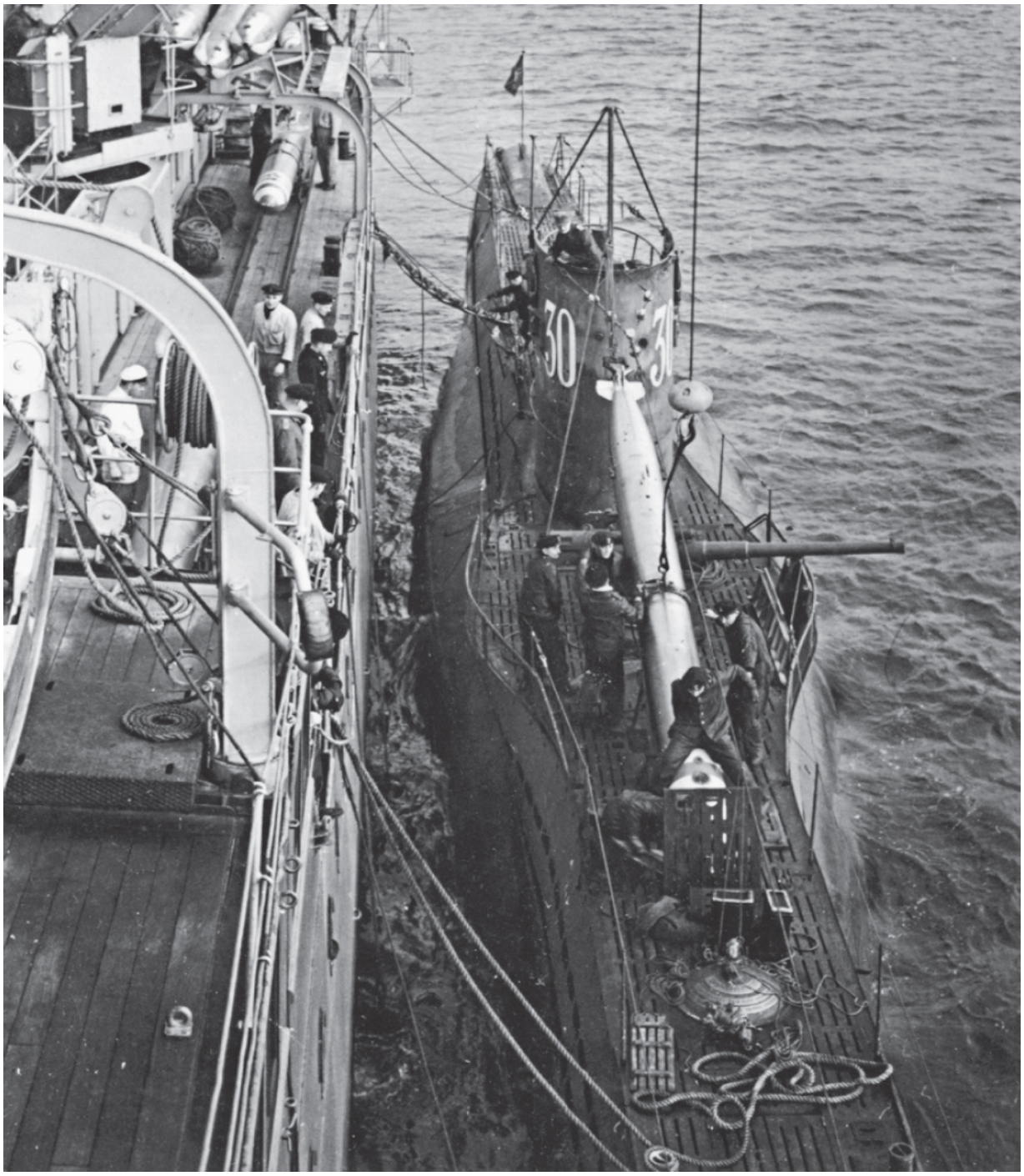


Schlesien employed as icebreaker in the winter of 1939/40. (Author's collection)

— 7 —
Sinking the Athenia

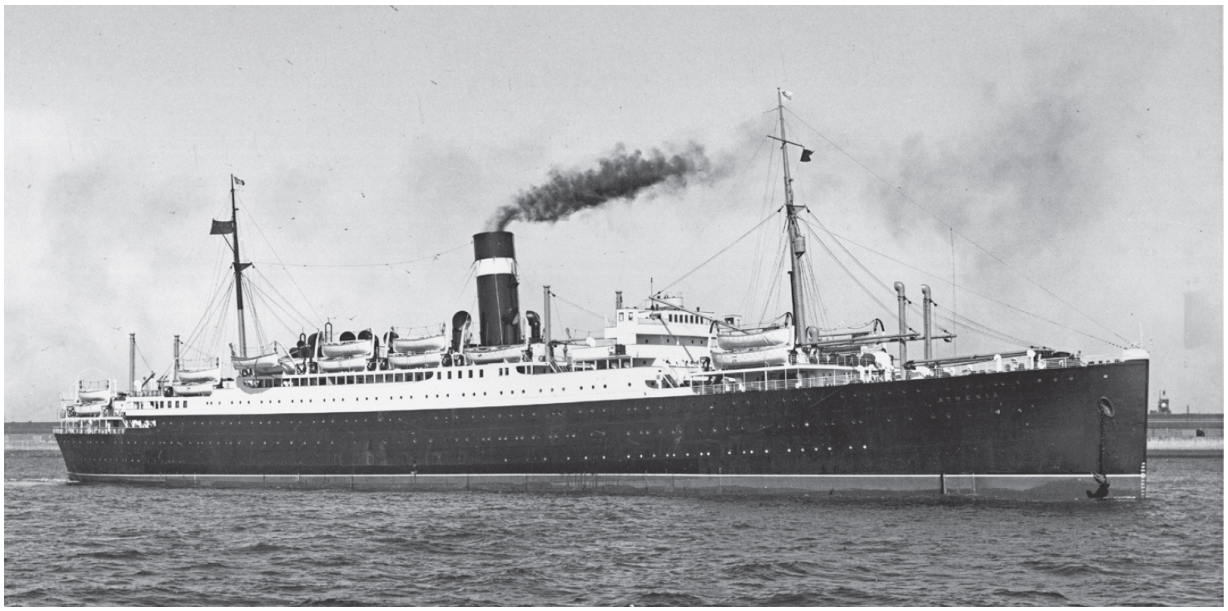
'What a Mess'

IN THE EARLY MORNING of 22 August 1939, the twenty-six-year-old Oberleutnant Fritz-Julius Lemp took his Type VIIA U-boat *U30* to sea. His orders were to proceed to a waiting location west of Ireland and stay out of sight until further orders arrived. *U30* was one of eighteen U-boats in the Atlantic with similar instructions. As soon as the *Beginn*-signal arrived from the SKL on 3 September, Lemp opened a sealed envelope given to him on departure and set course for his designated operational area. In the envelope was also a reminder to operate in strict accordance with the German Prize Regulations and there is no doubt that he knew what was expected of him. Lemp had been in command of *U30* for almost a year and had obtained the respect of his crew and his superiors.[1] On this first day of the conflict, though, his fervour, fuelled by the adrenalin of war, would tarnish his name forever.



U30 loading torpedoes before heading into the Atlantic in August 1939. (Author's collection)

Moving into the patrol area, Lemp found it, somewhat to his surprise, barren. As the sun started to go down, a freshening wind could be felt. *U30* had reached the southern edge of her zone and was turning north when finally an approaching ship was sighted on the horizon to starboard. Unknown to Lemp, he had stumbled across the 13,581-ton Donaldson & Black's Atlantic liner *Athenia*, heading for Montreal and Quebec.[2] She had 1,417 people on board, 1,102 passengers and 315 crew. Of the passengers, 469 were Canadian, 311 American, some 150 European and the rest British or Irish. Most of the European passengers were refugees from the war, counting themselves lucky to be aboard. Among them thirty-four German nationals, mostly Jewish. A high proportion of the passengers were women and children.



Athenia. (Author's collection)

Numerous cancellations and delays of ships scheduled to depart Britain in late August resulted in a rush of passengers to those ships actually leaving, and *Athenia* was filled to capacity. Every berth in every cabin was occupied and makeshift bunks had been set up in the gangways on B deck, the gymnasium and the third-class smoking room. Still, *Athenia* was well equipped to handle an emergency. The twenty-six lifeboats had a capacity of over 1,800 people and there were some 1,600 lifejackets on board.[3]

Athenia left Glasgow at noon on 1 September and after calling at Belfast and Liverpool headed into the Atlantic in the evening of the 2nd. Captain James Cook had been ashore in Liverpool to meet with the Naval Control Service and receive the latest instructions from the Admiralty regarding the tense situation. When returning to his ship at 16:00, he brought with him new signal codes, a long list of actions to take if war was declared and specific instructions as to the route he was to follow across the Atlantic, some 30 miles further south than usual.

In the late afternoon of 3 September, *Athenia* was about 250 miles north-west of Inishtrahull island and about 60 miles south of Rockall, doing 15 knots. The Radio Office had disseminated the news of war having been declared and there was an uneasy mood on board. The sea was relatively smooth with only a moderate swell, and most passengers were getting ready for dinner. Captain Cook did not wish to alarm his passengers unduly, but to be on the safe side the lifeboats had quietly been made ready: canvas covers taken off, davits connected and provisions packed.

For reasons not fully explained, as she was a passenger liner and immune according to the Prize Regulations, the ship was also blacked out and zigzagging. Wooden shields covered the windows of the public spaces, curtains and canvas sheets covered doors and openings, the portholes had all been painted out and all deadlights were closed.

Onboard *U30*, Oberleutnant Lemp's hunting instinct had undoubtedly been whetted by the recent *Beginn*-signal, but he was seriously in doubt. The

approaching ship was certainly a passenger liner, but she was darkened and well outside any passenger routes. Her high, black freeboard looked sinister and Dönitz had warned him about Q-ships and armed merchant cruisers operated by the Royal Navy: a fair game under the Prize Regulations. He called his first officer, Hans-Peter Hinsch, for a second opinion, but he had little to add. Convincing himself that the approaching ship was trying to avoid his attention, Lemp decided to attack. The battle for the Atlantic was about to be opened in a dramatic way.

Submerged, Lemp took *U30* across the bow of the oncoming ship and turned around for a clean shot from ahead. Eventually, *U30* was in a perfect location, around 1,600 metres away from the course of the liner. Orders for two torpedoes were given, followed by '*Torpedo Los*' – 'Torpedoes Away'. Only one torpedo left its tube, though. The second made a jolt but remained stuck with its engine running – a potentially dangerous situation. Lemp took *U30* down to get rid of it as soon as possible. Onboard *Athenia* several people later claimed to have seen the U-boat on the surface, some holding that shots had been fired at the liner.[4]

The firing of the torpedoes would have lightened the boat and it is not impossible that she broke surface for a while before the tanks were filled, taking her down. That shots were fired from *U30* is virtually unthinkable, though. Manning the gun and bringing up ammunition was a deliberate procedure not easily undertaken and highly unlikely, all the more so with a stuck torpedo in one of the tubes.

The torpedo came loose through pumping compressed air into the tube and it exploded at some distance from the boat.[5] About half an hour later, *U30* surfaced. The moon was up and a brisk wind rippled the sea. *Athenia* could be sighted at a distance, mast lights on and listing with her stern low in the water.

The radio operator, Georg Högel, picked up a distress signal in plain language: '*Athenia* torpedoed 56.42N, 14.05W, 1,400 passengers on

board'.[6] According to Hinsch, Lemp stuttered: 'What a mess! Why was she blacked out?'[7]

It was a horrendous mistake. Lemp had not taken the time that he should have done in order to identify correctly the ship he had attacked. The shock of realising the mistake he had made must have been enormous, evaporating all adrenalin in his system in an instant.

Maschinenobergefreiter Adolf Schmidt, later to be wounded and landed at Iceland, from where he ended up in Allied captivity, wrote an affidavit read at Nuremberg. In this he stated he was one of a few crewmembers who had been called to the tower by Lemp:

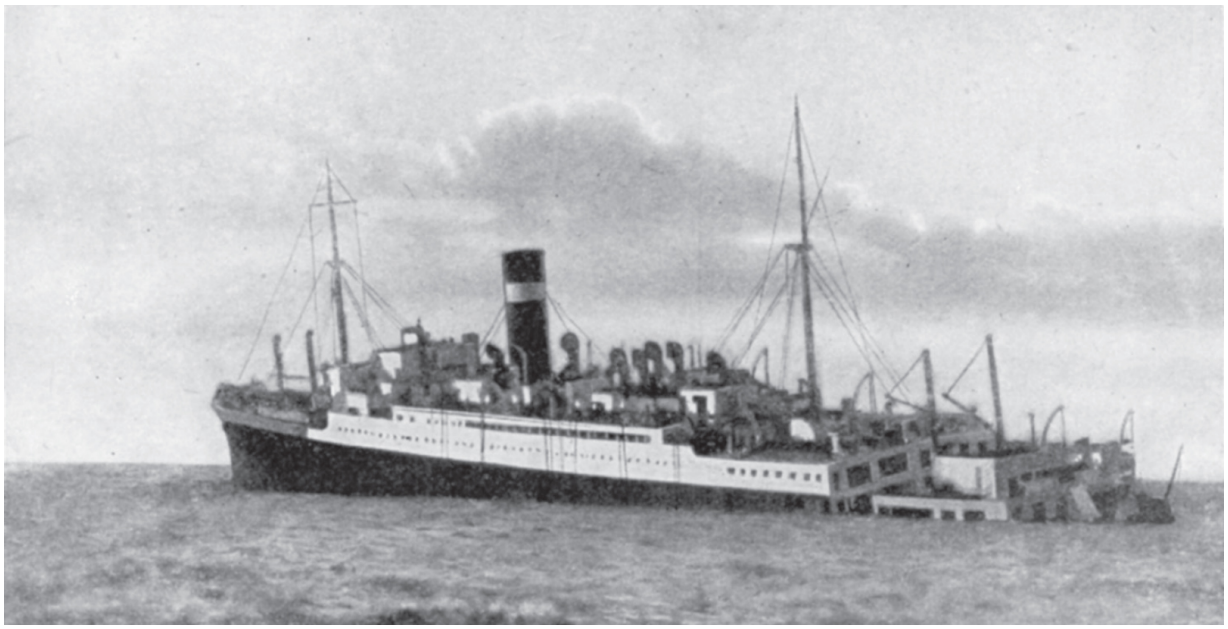
> Apart from myself, Oberleutnant Hinsch was in the tower when I saw the ship after the attack. I observed that the ship was listing [and] saw much commotion onboard the torpedoed ship. […] I believe one or two torpedoes were fired which did not explode, but I heard the explosion of the torpedo that hit the liner. Oberleutnant Lemp did not surface until after nightfall.[8]

There was little need for *U30* to conceal her location now that *Athenia* was transmitting, but Lemp must have been shocked into passivity as he failed to render any assistance to the survivors or make any radio signal either to Germany or to potential rescuers. It appears that he just wanted to get away, and *U30* left the scene. Lemp remained silent until 12 September, when he briefly informed FdU that the weather was poor. Not once did he notify anybody of the attack on *Athenia* until back in Germany.[9]

Wrecked Lifeboats

The torpedo struck *Athenia* on the port side aft around 19:30. Several of those on duty in the engine and boiler areas were killed. Pieces of metal and wood rained over the tourist deck, killing some and wounding several. Below decks, in the third-class quarters and aft dining rooms, there was absolute carnage. Cabins were smashed, corridors filled with debris and, below, water started pouring in. Some were trapped in their cabins and

drowned as the water rose. At least one of the stairways collapsed, hampering escape, and when the lights went out, a wave of panic rushed through the ship. Many tried to reach cabins where children had been tucked away for the night. Others waded through dark, water-filled corridors, trying to find a way out.



Athenia sinking. (Author's collection)

On the bridge, Third Officer Colin Porteous felt the ship reel violently to starboard when the torpedo struck, before staggering slowly back, settling by the stern with a slight list to port. Instinctively, he rang the telegraph to stop the engines and slammed down the control, closing the watertight doors. Shortly after, while Porteous was sounding the emergency stations alarm, Captain Cook arrived, taking command of his doomed ship. After verifying that all watertight doors were closed, Chief Radio Officer Don was instructed to send emergency signals in plain language. A limited number of ships were in the vicinity, reacting to *Athenia*'s distress signal. The first acknowledgement came from the Norwegian freighter *Knute Nelson*. She was some 40 miles away and estimated to arrive within three hours. Later, the Swedish yacht *Southern Cross* also answered, as well as the American *City of Flint*. These were further away, though, and would take longer to arrive.[10]

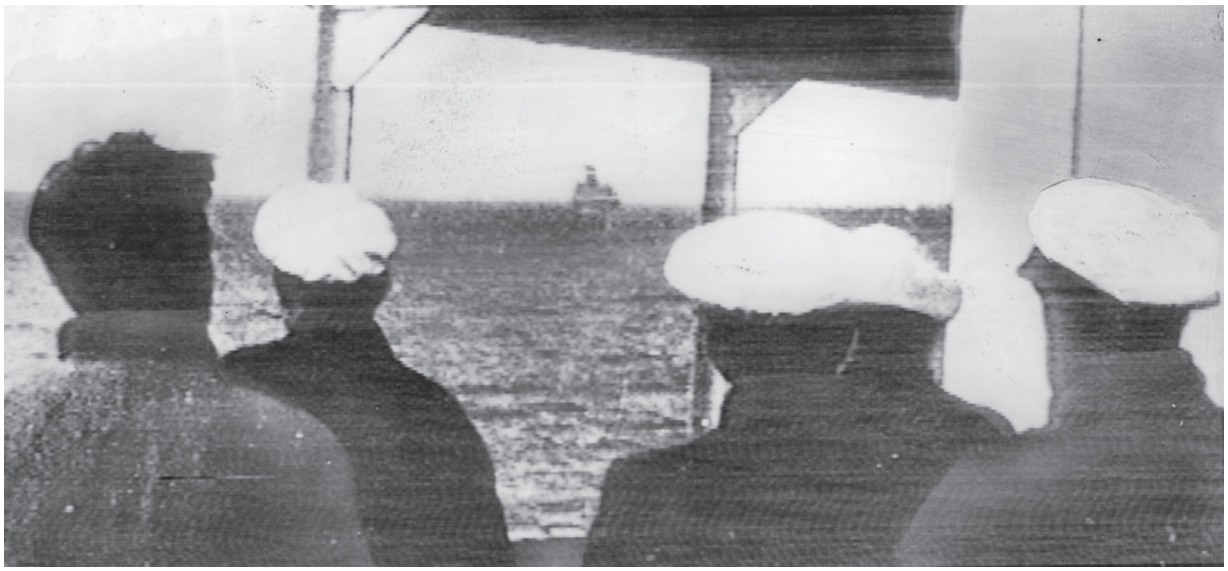
Chief Officer Barnet Copland raced aft to find out what had happened and the extent of the damage. The water was high in No. 5 hold, rising fast in No. 6, and the edge of the poop deck was awash. *Athenia* was inevitably going down, but Copland assessed it would take some time and it should be possible to get the boats away, saving most of those not already dead. Captain Cook decided to abandon ship, and ordered his crew to the boat stations.[11] Most remained disciplined, seeing to it that the boats were set to sea in an organised manner, contributing to the relatively low loss of life. Within half an hour, more than half of the survivors were off the liner. Due to the list, the boats to port went down easily, while those to starboard scraped down the side with some difficulty. Still, they all reached the water.

'Women and children first!' was the convention of the day and this was strictly observed, giving a disproportionate number of women and children on board the early boats. For reasons difficult to appreciate today, many young children, some even toddlers, were separated from their parents and put into the nearest boat about to be lowered. This resulted in numerous

scenes of anguish and added despair through the days to come. During the early confusion, some of the first boats were lowered before they were full, passengers later having to climb down ladders or lifelines before they cast off. During this, some fell into the oily sea, a few to drown, the majority to be pulled into a boat, shocked and miserable.

Light was fading quickly and in order to facilitate the lowering of the boats, Captain Cook instructed Chief Electrician Bennett to get the emergency dynamo working and, less than ten minutes after the torpedo had struck, a searchlight on the bridge as well as arc lights in the mastheads illuminated the decks of the liner. All twenty-six lifeboats got safely away. Some stayed close, others drifted into the darkness. Most of the passengers succumbed to seasickness or slumped into a misery of indifference for the rest of the night.

The last of the lifeboats, No. 7A, cast off at around 21:30. By this time, the list of *Athenia* had increased to about twelve degrees. Those remaining on board, Cook, Copland and a dozen of the crew and passengers, gathered on the foredeck. By 23:00, Cook decided it was time for them to go, and No. 5 motor boat was called back after having made room by transferring a number of those initially embarked on it to other boats that were less crowded. Before he left his office, Radio Operator Don locked the transmission key so that it sent a steady signal for the approaching ships to home in on. In London, the Admiralty received a signal from Malin Head coast guard radio at 22:30, informing briefly that *Athenia* was sending SSS signals, signifying she was under attack by a U-boat. Some twenty-five minutes later, another signal confirmed that she was sinking and had 1,400 persons on board. Urgent messages were forwarded to all naval units in the area with orders to assist.[12]



The sinking *Athenia* seen from *Knute Nelson*. (Author's collection)

Knute Nelson arrived at around midnight. Master Carl Johan Anderssen could see flares lit in several of the lifeboats as he approached and observed that they were quite full. His ship was in ballast and riding high in the water, so it would be a challenge to get the survivors safely on board. There was no time to lose and the Norwegian freighter hove-to, turning her side athwart the weather to make shelter for the lifeboats behind her hull. To keep her in this position, Captain Anderssen kept the two propellers turning slowly, giving his ship a slight headway. One of the first lifeboats to come alongside was No. 5, the motor boat carrying Captain Cook and Third Officer Porteous.[13] An undoubtedly relieved Cook climbed on board and was immediately invited to the bridge by Captain Anderssen to tell him what had happened and to provide assistance with the rescue operation. Other lifeboats approached, being rowed by whoever could hold an oar. Rope ladders were thrown over the side and a bosun's chair was rigged to hoist those who could not climb themselves. One by one the survivors were brought to safety.

One boat approaching *Knute Nelson* was the overcrowded No. 5A. She had some way to row and those manning the oars were largely passengers, so progress was slow. At 04:00, when she was finally nearing the freighter, several empty boats were tied to the railings and boat No. 12 was still being emptied. The Norwegian crew shouted and motioned for them to stay out and wait their turn. But No. 5A lifeboat, which carried around ninety persons, largely women and children, ended up astern of boat No. 12, very close to the blades of the slowly turning propellers, with tops extended out of the water. Just then, a lookout on the bridge of *Knute Nelson* reported a lifeboat sinking ahead. Neither Captain Anderssen nor Captain Cook could see it, but when the report was repeated with some urgency, Captain Cook rang the engine telegraph for full ahead just in case. The freighter's propellers reacted immediately, churning the water under the stern to white foam. Tragically, lifeboat No. 5A's hawser became taut and snapped under

the strain, the still-packed boat falling back into the now fast-revolving starboard propeller. In spite of frantic shouts from the deck to stop the engines, it was too late. The lifeboat was drawn into the propeller and cut to pieces. Those who were not killed instantly were flung into the water, drifting into the darkness as *Knute Nelson* drew away in spite of some Norwegian sailors sliding down the lifelines to rescue people in the water before it was too late. Eventually, fewer than a dozen of the people from lifeboat 5A were picked up, some after several hours of clinging to pieces of the wreckage.[14]

Two and a half hours after *Knute Nelson*, the *Southern Cross* arrived and started to take survivors on board, into her world of luxury. It must have been strange for the wet, cold and miserable rescuees to be welcomed on board the white, clean-scrubbed yacht, brilliantly lit, and offered hot drinks and warm clothes of every possible size and form. Unfortunately, an accident also occurred at *Southern Cross*. The elegant yacht rode gently in the Atlantic swell, but her small size made the stern come close to the water every time a wave rolled underneath her hull. No. 8 lifeboat ventured too close while waiting for her turn to be emptied and one particularly large swell sent the stern crashing down on her, throwing more than fifty persons, including many children, into the water. The *Southern Cross* did not have a large crew, but some of the sailors jumped into a couple of the empty lifeboats and managed to pick up around forty of the unfortunate men and women from No. 8 lifeboat. The Polish refugee Isaac Stotland and his wife were in one of the other boats waiting their turn while their two children, both under ten years of age, were onboard No. 8 lifeboat. Seeing the boat with their children being forced down, Stotland jumped into the water and swam towards the overturned wreckage. He pulled a dozen children to safety, but neither of his own was among them, both being lost.

The Polish refugee Isaac Stotland and his wife were rescued, but lost both their children when No. 8 lifeboat was crushed under the stern of *Southern Cross*. (Author's collection)

Just before dawn, the two British destroyers *Electra* and *Escort* arrived.[15] While the former started patrolling the area for U-boats, *Escort* picked up the survivors still in the water and thereafter those in the boats, including those clinging to the remains of No. 5A lifeboat. Later, when the destroyer *Fame* also arrived, she took over the search while *Electra* assisted *Escort* to rescue the remaining survivors from the boats.

The last boat to be taken care of was No. 14A lifeboat, with 105 people on board. This was the boat that Chief Officer Copland had transferred to and, coming on board the *Electra*, he climbed the bridge of the destroyer to be welcomed by Lieutenant Commander Buss. He also met the nurse of *Athenia* and, going through the list of survivors, they discovered that it was likely that a woman had been left in the sickbay of the liner. She had fallen down a ladder before the attack, suffering a concussion, and nobody could ascertain that she had been evacuated. Copland convinced Lieutenant Commander Buss he needed to go back and, with *Electra* moving close to the sinking liner, a boat was manned by sailors from the destroyer. Copland and two volunteers re-entered the sinking ship, found the woman in the sickbay and brought her on board the destroyer.[16] Within minutes of their return to the destroyer, at 10:40, *Athenia*'s stern slipped beneath the surface, her bow rose towards the sky and she slipped quietly under.

Of the 1,417 aboard, 1,305 were rescued while 112 perished – ninety-three passengers and nineteen crew. Twenty-eight of the dead were American citizens. *Southern Cross* had picked up over 350 survivors, *Knute Nelson* around 450, *Electra* 200, *Escort* 300. The Norwegian freighter headed for Galway, the destroyers for Greenock on the Clyde.[17]

By 09:00, the American freighter *City of Flint* arrived at the scene. Few remained to be rescued, but in spite of the choppy sea a boat was lowered to pick up stragglers from some of the lifeboats bobbing around and to check that the others were empty. Thereafter 236 rescuees were transferred from the *Southern Cross* as she was not equipped to handle such a large number

of additional people. Those rescued by *Southern Cross* and not wishing to continue to the USA, including all *Athenia*'s crewmembers, were taken on board the other ships. Ascertaining that there were no further people to be rescued from the now-empty lifeboats, Captain Gainard bid the Swedish yacht goodbye and set course for Halifax, where he arrived on 13 September. *Southern Cross* continued towards South America.[18]

Within twenty-four hours, news of the sinking echoed around the world. It had been the first day of the war and already it appeared that Germany had broken all the rules and introduced unrestricted submarine warfare. This was a propaganda gift to the British, who used it to its full extent and all merchant ships were encouraged to start reporting any U-boat on sight. On a practical note, the sinking of *Athenia* instantly removed any doubts in the Admiralty regarding the institution of the convoy system and instructions were issued forthwith towards its swift establishment.

In Germany, the news of the sinking of *Athenia* was received with disbelief and astonishment. The fear that the significant loss of American lives would draw the USA into the war was real, and an immediate statement from the OKW that 'no German submarine was in the area at the time' was issued in the early morning of the 4th, before any proper investigation had been carried out. Dönitz first learned of the sinking through the BBC in the morning of the 4th. It came as a surprise to him as the SKL was in the dark as to what had happened; the orders to follow the Prize Regulations to the letter were repeated by signal to all U-boats at 11:00. Hitler's orders had been clear and it was difficult to believe they had been breached.[19]

Athenia survivors being landed at Glasgow by *Knute Nelson*. (Author's collection)

Having reviewed the patrol zones of the U-boats in the Atlantic, Dönitz at midday concluded correctly that in all likelihood it had been Lemp in *U30* that had sunk *Athenia*. By then, the US Embassy in Berlin had been informed by the German Foreign Office that no German U-boat had been involved in the sinking. Later, Raeder repeated the same statement to the American naval attaché: probably acting in good faith. The Propaganda Ministry of Josef Göbbels went one further and held that as no U-boats had been in the area, it must have been a British torpedo that had sunk the liner. Hitler was furious and another signal was sent from the SKL just before midnight: 'By order of the Führer, no attacks are to be carried out on passenger liners, not even when in convoy.'[20]

Dönitz was waiting in the docks to hear Lemp's account first-hand when he eventually returned to Wilhelmshaven on the 27th. He and his crew were sworn to absolute secrecy. They were not ever to mention anything at all to do with the incident. The war diary of Dönitz makes no mention of the incident and Lemp was ordered to falsify the war diary (Kriegstagebuch – KTB) of *U30* by rewriting two complete pages.[21] A court martial for Lemp was considered but decided against, as Dönitz was satisfied that he had 'acted in good faith'. In all likelihood there was also a significant wish to avoid the public attention that a court martial would have created. Lemp had sunk three ships (including the *Athenia*), captured two British airmen, demonstrated control under attack and brought his boat home in spite of severe battle damage. To punish him for a mistaken identity would send the wrong signal to the rest of the U-boat force and Dönitz decided it would be best to sweep the whole thing under the carpet. It was never acknowledged during the war that the *Athenia* had been sunk by a U-boat.[22]

In Washington, President Roosevelt had already announced that his government was preparing 'a declaration of American neutrality' and, though serious, the *Athenia* affair would not change that.

— 8 —
Contact Obtained

Echoes

AT THE END OF WWI, the British Navy had developed a prototype for active underwater sonar-based submarine detection gear, the so-called Asdic.[1] By 1923, the 6th Destroyer Flotilla operated several Asdic-equipped vessels on a regular basis. The following year, the Anti-Submarine Warfare School, HMS *Osprey*, was established at Weymouth and a training flotilla of four vessels set up at Portland.

Asdic works by sending a narrow, ultrasonic sound wave, created by an oscillator, through the water. When it strikes anything, including the hull of a submerged submarine, an echo is bounced back that can be picked up by a hydrophone in the A/S vessel. The transmitter and receiver were usually housed inside a dome fastened to the outside or lowered by an electric motor through an opening in the bottom of the ship's hull. That was usually no problem at sea, but vulnerable to damage in shallow, coastal waters. On board, the echo was recorded as electrical impulses heard by the operator and displayed on a screen or as marks made by a stylus on a paper roll. The hydrophones of 1939 could determine the direction of the echo quite accurately. The distance to, and hence the depth of, the object giving the echo was not given, though.

The Asdic operator, sitting in a small cabin near the bridge of the A/S vessel, operated the equipment via a wheel, sweeping the Asdic beam around the ship, searching for echoes. Submerged submarines could be detected at a distance of up to 2,700 yards. So too would wrecks, schools of

fish and anomalies in the water column, and it would take an experienced operator to know what he had in his beam. In reality, a U-boat had to be within 1,600 yards to be firmly ascertained, and even closer if it was end-on. When an echo was established, its bearing was forwarded to the captain via the Asdic officer in charge, including an estimated distance to the object based on the strength of the echo. If possible, positive or negative Doppler effect was added, indicating an increase or decrease in the frequency of the echo, signifying if the A/S vessel and the U-boat were closing or moving away from each other. By September 1939, four different Asdic sets for various types of surface vessels had been developed, as well as one for submarines. Some 180 vessels were fitted with Asdic. Of these, 150 were destroyers, twenty-four were sloops and six were other types of patrol vessels.[2]

A/S warfare was considered tedious before the war and limited attention was paid to training the officers and commanders to understand what the instruments told them and how to use the information tactically. There was a delicate chain from the Asdic operator to the captain and his team on the bridge, and from them to the depth-charge operators on deck. Unless all elements of this chain were fine tuned and aware of their dependence on the others, day and night and in all kinds of weather, the weapon system was less than fully efficient. Knowing where the U-boat was, even if detected by the Asdic, was far from easy and required quick three-dimensional thinking by the captain – all the more so as the Asdic lost contact as the escort increased speed, closing the distance to deliver the attack. In difficult Asdic conditions, or when the water was disturbed by multiple depth-charge explosions, the chance of a U-boat escaping a single A/S vessel was relatively good.

The use of several ships in cooperation, one keeping Asdic contact while the others attacked, increased the efficiency of the A/S vessels significantly, but was a tactic that also had to be learned and exercised.

Few in the Royal Navy were proficient in A/S warfare in 1939, and when the ranks swelled with a large number of RNVR, draftees and volunteers, the overall competence did not increase. Intense practice was needed, not least on the after deck where reloading of the depth-charge throwers was found to be disturbingly slow.[3]

Hardly any Asdic exercises had been conducted under conditions close to reality. In the exercises that were held, it was often found that the Asdic failed and even when it did work, it had a number of weaknesses. British submarine captains found it relatively easy to escape Asdic-equipped destroyers, once they learned how the apparatus worked and how the A/S crews responded to the information it gave them.[4]

By overestimating the efficiency of Asdic and not appreciating its deficiencies and the need for adequate training, the Admiralty to a large degree predestined the Royal Navy to start the war with a severe handicap. The fact that some U-boats were sunk seemed to confirm the belief of the Admiralty that a convoy system backed up by Asdic, aerial reconnaissance and more effective depth-charges would all but neutralise the submarine threat. That the sinkings were significantly overrated and that most U-boats actually got away was dismissed, as was the fact that most of the Asdic sets were fitted in destroyers intended for fleet-work and not convoy escort. Likewise, it was not appreciated that surface attacks at night would render both Asdic and aircraft useless. Few believed at this stage that high-quality radar and radio direction finding would be as important as Asdic in overall convoy protection.[5]

On 20 September, destroyers *Imogen* and *Ilex* were patrolling south-west of Land's End under the command of Commander Henry Pawsey on board *Keith*. Lieutenant Robert Ewing was first officer of *Imogen*. His diary is revealing of the confidence some officers carried regarding their ability to defeat the U-boats:

At 7.20 p.m. we received from Flying Boat: 'Am over enemy submarine in pos. 49º 42' N, 07º 25' W. *Keith* made to *Ilex*: '[Will] proceed to search for S/M on or near surface. Patrol independently during the night to eastward of 8º 30' W, rejoining me in me in 49º N, 9º W. Why in God's name he did not take all of us to search I cannot understand. We were doing nothing in particular and sending one destroyer to find a submarine after half an hour's delay is fantastic. […] He is obviously out of touch with things. […] *Keith* reaped his reward from C-in-C Western Approaches in the following: 'When report of U-boat is definite, your whole force should be sent and remain until she is destroyed.'[6]

C-in-C Western Approaches Admiral Martin Dunbar-Nasmith was one of the first to realise the deficiencies of the A/S systems, and he issued a series of instructions on 25 September to the Anti-Submarine Striking Forces operating under his command. It was essential to sink U-boats and kill or capture German submariners. One of the paragraphs read:

When contact is obtained, the U-boat is to be hunted continuously and relentlessly until destroyed. Should contact be lost, the search is to be continued day and night until is regained. No contact is ever to be relinquished until it is considered certain that the U-boat has been destroyed, or it has been established the contact was a 'non-sub'.[7]

Whenever an attack on a U-boat was reported it was assessed by a committee of the Anti-Submarine Warfare Division and given an official status as sunk, damaged or even 'non-submarine' at times. The NID made aggregated valuations based on these assessments and independent information available to them. Surprisingly, this created a serious contention between NID and the First Lord, with Churchill wishing to announce measures of success while NID saw the need for an accurate assessment as the basis for tactical and operational amendments. Still, even NID overestimated the number of U-boats actually sunk. At the end of 1939, Churchil implied that some forty U-boats had been sunk so far in the war, NID held a maximum of twenty-five, while the actual number was nine. By 10 March 1940, NID estimated a maximum of twenty-one sunk versus the actual number of sixteen (see Appendix G).

At the beginning of the war, the only A/S weapon available to the Royal Navy was the depth-charge. This was little more than a free-sinking

cylindrical container filled with around 330 pounds of high explosive, originally Amatol, later changed to Minol, a mixture of TNT, ammonium nitrate and powdered aluminium, which had a greater explosive effect for the same weight and volume.[8] The depth-charges were detonated by a firing pistol activated by hydrostatic pressure with fixed settings at fifty-foot intervals from 50 to 500 feet (15–150 metres).

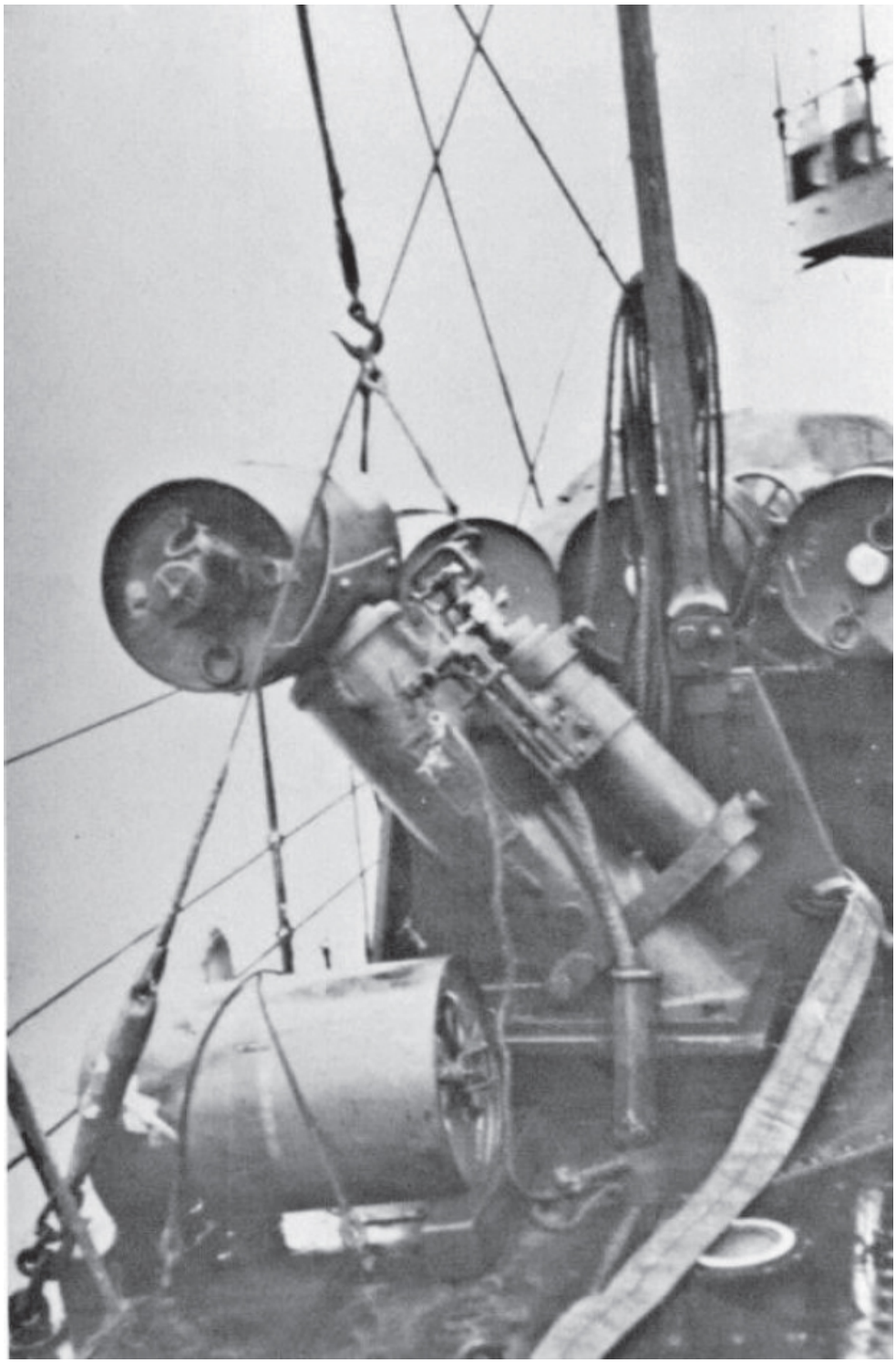
The Royal Navy Type D Mark VII depth-charge, which was standard by 1939, had an initial sinking speed of 2 metres (6 feet 6 inches) per second, increasing to 3 metres (10 feet) per second at depth. Improved sinking rates were obtained by adding cast-iron weights to the charges. When it was realised that the U-boats went deeper than expected, improved hydrostatic triggers later also increased the maximum triggering depth. In theory, if the charge exploded within 15–25 feet from the hull of a U-boat, the submarine would be destroyed. At more than twice that distance, damage could still be significant, often forcing the boat to surface.

Usually, the depth-charges were dropped in a pattern of five if a U-boat had been identified. Three were dropped or rolled from the stern in succession, some 150 feet apart, while two were fired from depth-charge throwers, one on each side amidships, to a distance of 150 feet from the ship. These two were timed to hit the water at the same time as charge number two was dropped from the stern. The T-shaped depth-charge holders were manhandled into the throwers, whereafter the charges were set in place by a block and tackle. It was hard work, which meant that time was needed to prepare each attack. Not all trawlers or auxiliaries had depth-charge throwers installed from the start.

Pink Gin

There is no doubt that the failure of the Admiralty to accept the need for and provide adequate numbers of suitable escort vessels with satisfactory A/S capacity in terms of Asdic, weapon systems, tactics and training in

time, was a serious blunder. With the exception of a limited number of multi-purpose sloops, no A/S escort vessels were built by the Royal Navy between the two wars; the destroyers were built for a different purpose, with A/S capacity as, at best, a secondary task.



Depth-charge ready for action on board the destroyer *Ardent*. The cylinder on top of steering-guide is the explosion chamber, set off by the rope attached to the firing wedge and pistol on its top. (M Sellick collection)

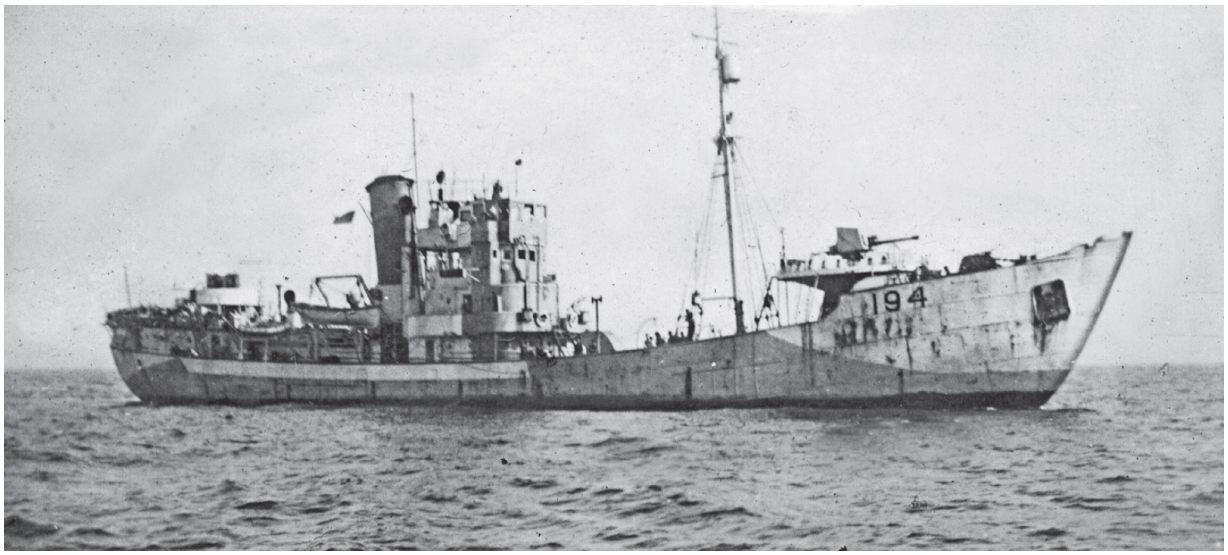
The explosive effects on the surface were also huge and the A/S vessels frequently suffered damage. (Author’s collection)

Having been deployed singly or in small groups at overseas stations around the world, a number of the sloops were called back to Britain during 1939. Most of them needed a spell in the yards before being assigned to convoy escort and when deployed, as with the corvettes later, they were found unsuitable for sustained work in the Atlantic under winter conditions. The Hunt-class destroyers, designed during 1938 in an attempt to provide a seagoing escort for both warships and convoys, were few in numbers due to yard capacity and they did not really stand up to sustained deep-sea convoy work during the winter season either. Smaller vessels, motor torpedo boats (MTBs) and motor gunboats (MGBs), to protect coastal convoys from surface or air attacks were not on the agenda of the Admiralty until the war had already started and it would take a long time before these were effectively operational.

During the summer of 1939, the Admiralty commenced requisitioning the first of around 400 trawlers and drifters between 200 and 600 tons for a rebuild of the auxiliary fleet. Half of the vessels would be equipped for A/S duties, the rest for mine-sweeping. By the end of the summer, eighty-seven ships were acquired, twenty of them directly from the yards.[9]

As the outbreak of war approached, further ships in every fishing port around Britain were taken over as they returned from the fishing grounds. Nets, warps and tackle were stowed away on land while the fish-holds, still smelling of the last catch, were turned into mess decks. Then trucks arrived with floats, otters, kites, wires and a multitude of crates. A 4-inch gun, or sometimes a 12-pounder, was mounted on the foredeck, usually after a strengthening of hull frames and deck beams. One or two 20-mm Oerlikon or Bofors guns aft of the funnel, a couple of Lewis or Hotchkiss machine guns in the bridge wings for close A/A defence and a few rifles for destruction of drifting mines completed the armoury. On top of most trawlers' bridge houses an open enclosure was set up, known as 'mount misery', complete with a sheltered chart table, master compass and voice-

pipes. Confusion reigned, but somehow most ships had rigged their gear and were ready for war within a couple of days. Royal Naval Reservist Sidney Kerslake, a fisherman with four-and-a-half years' experience of northern waters, was called to the Royal Naval Patrol Service (RNPS) at Lowestoft and was eventually posted on board the trawler *Northern Gem*:



A/S trawler *Northern Gem. Northern Gem* and her *Northern* sisters had been built in Germany in 1935 as reparation of debt. They were fine ships, larger than the ordinary British fishing vessels. (E Skjold collection)

On 17th September 1939 I found myself on a train with the rest of the crew, bound for Barrow-in-Furness, to join His Majesty's Ship 194. It turned out to be the armed escort trawler, *Northern Gem*, which I had seen several times before the declaration of war, on the northern fishing grounds of Iceland, Bear Island, the Spitzbergen grounds, and the Barents Sea. […] Our first glance around the *Gem* gave us a picture of complete shambles. Everything seemed to be in pieces, with gear of all shapes and sizes lying about all over the place, decks were cluttered up as were the alleyways, the compartments and the engine room. I believe the only compartment that hadn't been turned out was the crews' quarters. […] The armaments consisted of one 4-inch quick firing gun of WWI vintage, set on a platform just above the after end of the whaleback, and behind the windlass which was used for hauling in the anchor, or in some cases hauling the ship alongside the quay by means of the head rope. Amidships, on either side of the Skipper's cabin, was a sort of half round platform on each of which there was situated a twin Lewis gun. Further aft and actually on top of the galley and in between both the port and starboard lifeboats there was another twin Lewis gun. Apart from the depth-charge rails right in the stern, and the single depth-charge thrower on the deck at each side of the galley. […] nothing much had changed since she had fished. […] The crew consisted of a skipper lieutenant, a coxswain, a leading hand, four or five seamen, a chief and second engineer, two firemen or stokers, a cook and a gunner. […] The flotilla [consisted of] the *Northern Dawn*, the *Northern Wave*, the *Northern Spray*, and the *Northern Pride*.[10]

Once fitted out and painted in Admiralty grey at local yards and workshops, the smaller and older ships were bundled into mine-sweeping flotillas, four to six in each group. Some of these groups were supplemented by requisitioned paddle steamers, ideal in draught and speed, but only suitable for fine weather, near-shore work. The larger and more modern trawlers received Asdic and depth-charge tackle to fight U-boats.

More often than not, most of the original crew of the drafted boats were kept, while a few navy officers were added, together with weapons specialists and signals staff. Some of the sailors were RNR and had varying amounts of training, others had none. Around 230 trawler skippers had received peacetime training in the handling and use of sweeping gear, as had a handful of RNVR yachtsmen. For these, and other qualified men holding a Board of Trade Certificate of Competency, the special rank of skipper RNR was instituted, equivalent to warrant officer RN. Most ships had an RN officer as commander and a RNR skipper as first officer, but in

some a senior RNR skipper acted as commander as well.[11] Group leaders were generally RN officers. Retired officers with experience of sweeping were recalled and, after a quick refresher course appointed as port mine-sweeping officers or commanders of the new mine-sweeping flotillas. By the end of the year, a total of 582 ships, mostly trawlers, drifters and yachts, had been requisitioned for mine-sweeping. An area outside Lowestoft, known as HMS *Europa*, or more commonly as Sparrow's Nest, was chosen as a suitable assembly point, depot and headquarters for the rapidly increasing fleet of what was now known as the Royal Naval Patrol Service.[12]

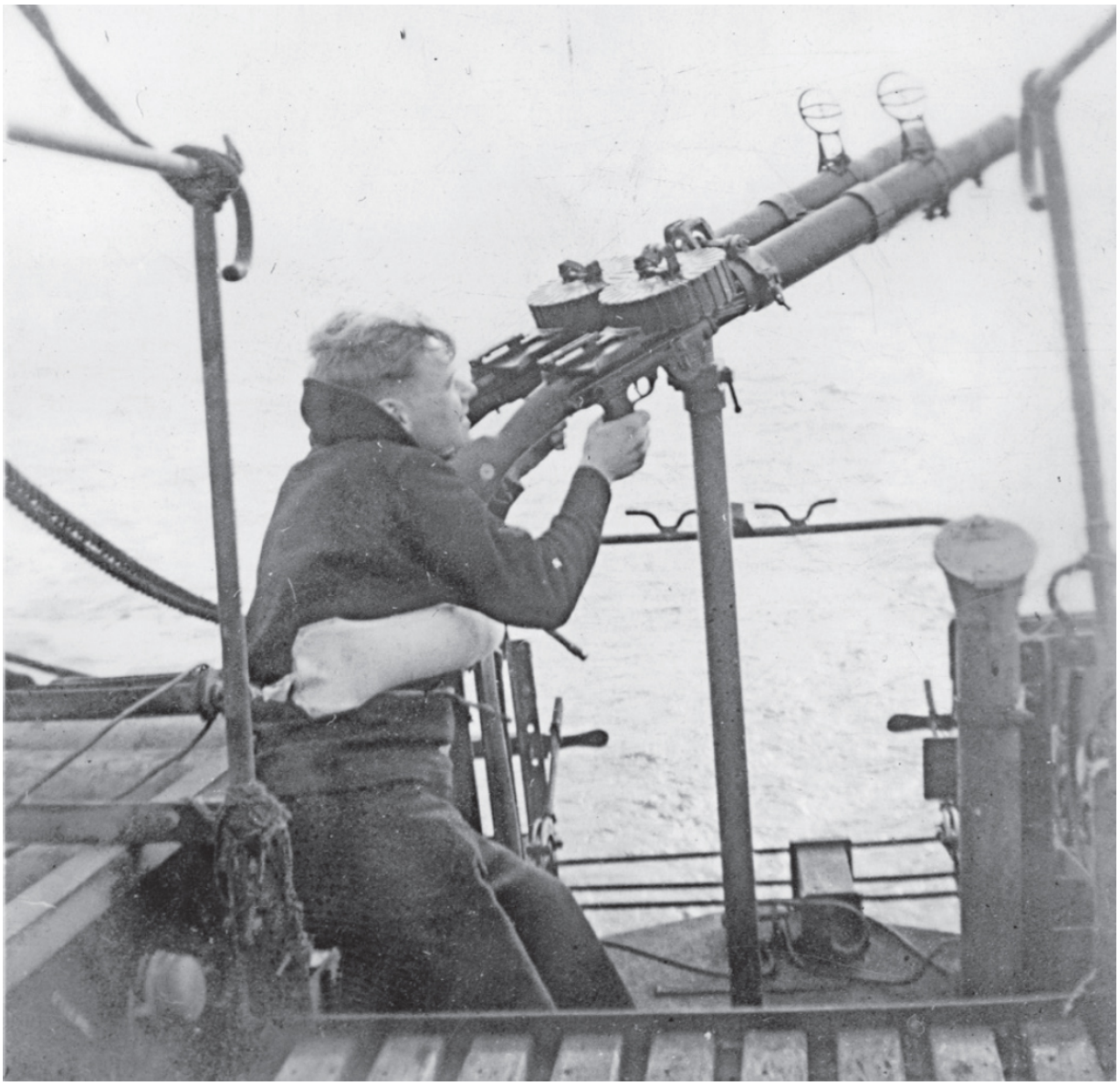
By February 1940, most trained personnel of the RNR and RNVR had been mobilised and the 'hostilities only' personnel started to come in. These were eager enough, but lacked pre-war training and needed a longer time to become functional. In all, 1,921 ships had been requisitioned by 31 December 1939. By April 1940, this had risen to 2,199. Besides mine-sweeping, convoy escort and A/S work, most of the vessels were deployed for harbour protection, contraband control or transportation. A handful of the larger trawlers were assigned as armed boarding vessels (ABVs) operating with the Northern Patrol.[13]

The quantity of new sailors and officers, many with significant experience from years at sea, opened up a number of unforeseen challenges where discipline and standards of 'spit and polish' were somewhat different than in the peacetime Royal Navy. As the auxiliary services were rather unglamorous, the officers tended to be junior, and many young RN lieutenants found it hard to handle seamen twice their age and used to a rough life. Hence, many older RNR or RNVR officers, often from a long life at sea themselves, were sent to the little ships. Discipline, language and uniforms often horrified the career officers on cruisers and destroyers. Having a little ship up front, with sweeps out, was always welcome, though,

unless it was a ‘Smokey Joe’ with bad coal, seen from miles over the horizon.

One unit equipped with trawlers was the 15th A/S Striking Force, working off Scotland in the autumn of 1939. Its rather flamboyant commanding officer was Lieutenant Commander Martyn Butt Sherwood on board *Cape Pesaro*. Lieutenant Colin Warwick reported on board in early September, having been told that Sherwood had requested his RNVR lieutenant to be replaced forthwith by a RNR officer with some experience.[14] Warwick later wrote:

> Over a pink gin, Sherwood commented that his crew of Hull, Grimsby and Fleetwood deep-sea trawlermen seemed a little ‘mutinous’ regarding his RNVR No. 1’s handling, saying ‘He screams at them and they fart back at him!’ […] Rogers, the Coxswain, told me that my predecessor had refused to handle a problem regarding lice or ‘crabs’ with which most of the seamen had become infected by their female contacts in Hull. ‘Have all the seamen shave off their body hair and dispose of it, and we will see the base doctor about getting some blue ointment to rub on their personal parts,’ I told Rogers.[15]



Rating Bardsley operating the double .303 Lewis gun on board *Northern Spray*. (E Skjold collection)

After some direct communication with the ‘lads’ in a language they understood, including how the *King’s Rules & Regulation* and the *Admiralty Instructions* were to be applied on board, Lieutenant Warwick got a firm grip on the mess deck and the war could commence. Besides *Cape Pesaro*, the 15th A/S Striking Force consisted of *St Goran*, commanded by Lieutenant Commander William McGuigan, *St Kenan* with Lieutenant Jimmy James and *St Loman* with Lieutenant John Cambridge.[16]

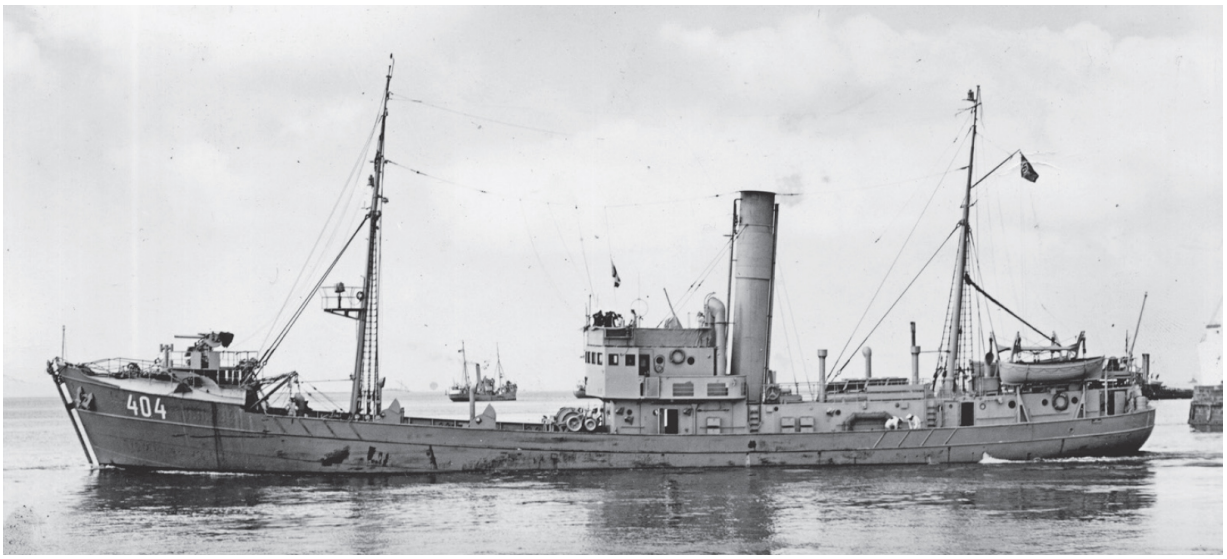
These ships were newbuilds taken over by the Admiralty straight from the builder’s yard or only a few years old. They were armed with one 4-inch gun, two or three machine guns (MGs) and forty to fifty depth-charges. The crew had ‘adequate conditions but lacking in comfort’. The mess decks and sleeping quarters for the seamen and stokers were in the converted holds below the foredeck. The officers’ wardroom and cabins, usually shared, were further aft. The only place with some comfort was the skipper’s cabin, as a result of the trawler companies trying to attract the best of those, before the war.

Joining them in Aberdeen were also the 16th A/S Striking Force led by the no less flamboyant Lieutenant Commander Geoffrey Congreve in *Aston Villa* and accompanied by *Arab, Angle* and *Gaul*. Their patrol area was the North-Western Approaches and the entrance to Scapa Flow. To ease the burden on the men of the small ships, Sherwood and Congreve used their old networks and obtained permission to keep Aberdeen as home port while using Scapa Flow as the operational base. For the seamen and officers this meant a most welcome spell in Aberdeen for boiler cleaning and maintenance every five to six weeks and a more varied entertainment ashore.[17]

In spite of high expectations, the results of the A/S Striking Forces during the first winter of the war were rather meagre. Few U-boats were intercepted and most of the patrols were routine, fighting the weather more than the Germans. Only on one occasion in February was a contact gained

and depth-charges dropped. Oil came to the surface and the contact vanished, but no U-boats were lost or damaged in the area at the time so it might not have been a U-boat at all.

It would be quite some time before the Royal Navy realised that finding a lone U-boat in deep waters was extremely difficult, basically down to serendipity, and that resources would be better spent protecting convoys.



The Kriegsmarine also employed trawlers extensively for numerous tasks. This is *V404 Gebrüder Kähler* in the autumn of 1938 off Bremerhaven. (Author's collection)

— 9 —
Learning the Hard Way

'All Clear For'ard'

THE BRITISH MERCHANT FLEET consisted of some 21 million tons of shipping at the outbreak of the war. Anticipating hostilities, the Cabinet Committee responsible for Defence Preparedness placed the British merchant fleet under the direction of the Trade Division of the Admiralty, led by Acting Chief of Naval Staff Rear Admiral Harold Burrough, on 26 August 1939. This 'Control of Shipping' gave the Trade Division, through the Naval Control Service Officers (NCSOs) stationed in most ports used by British vessels, the authority to organise routes and issue orders for the convoys, including the organisation of their escort. The use of British merchant shipping through purchase or charter rested with the Ministry of Shipping (later joined with the Ministry of Transport to become the Ministry of War Transport), as did the manning of the merchant navy.[1]

After securing necessary auxiliaries for the Royal Navy, it soon became clear that, contrary to pre-war assumptions, the British merchant navy was incapable of sustaining even a minimum of imports. Neutral shipping was desperately needed, and a large number of Greek, Danish, Dutch and Belgian vessels were chartered. Polish ships outside German control were also integrated in the British merchant navy. Many of these had British masters appointed to them and sailed under a British flag. Other neutral merchant ships, Swedish and Norwegian in particular, were secured for British use through bilateral shipping agreements.

In May 1938, the Admiralty had concluded that a convoy system would most likely have to be introduced after the outbreak of war. A ‘restricted’ U-boat warfare, it was believed, could be countered by existing A/S technology, independent routing, arming of merchant ships and so on, but it was far more likely that ‘unrestricted’ warfare would develop. Staff officers were earmarked and trained for the planning and organisation of convoys, but parallel training and development of dedicated escort forces was limited and the A/S branch was left with low priority. As a result, few senior British officers had an A/S background and very few of the active commanders at sea in 1939 had much knowledge or competence in A/S technology or tactics.[2]

The sinking of *Athenia* on the first day of the war seemed to indicate that an unrestricted U-boat war was a reality, and within days the first convoys were organised. It would be mid-October before Admiral Burrough’s Trade Division formed the Anti-Submarine Warfare Division to develop tactics and means to protect them.

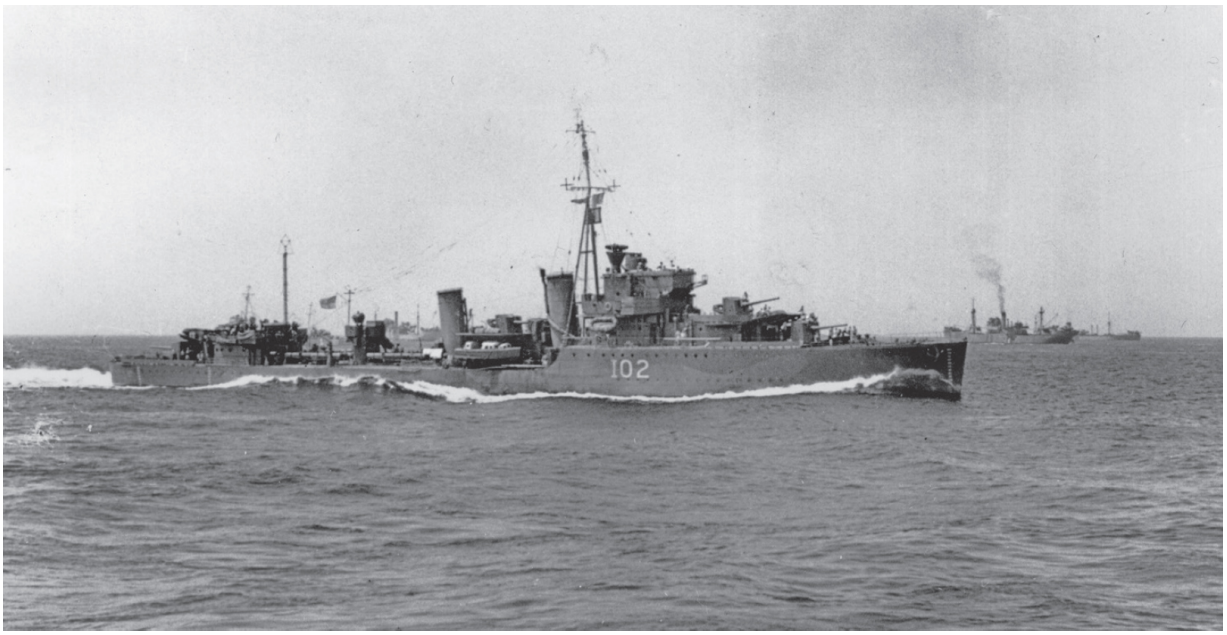
At first, the convoy system was met by resistance from the shipowners, who, thinking largely of short-term profit, did not welcome the perceived delays and added fuel cost of not being able to take the shortest route. Many captains found the convoys unnecessary, trusting their own speed and luck. It soon became clear that this was ill-advised. During the first months of the war the loss rate was less than 1 per cent for ships sailing in convoy. For those sailing independently it exceeded 10 per cent. When it became obvious that these numbers owed as much to mines as to torpedoes, the majority of captains and shipowners submitted to the inevitable and accepted that any effort to stay within the convoy was worthwhile.

Initially, only ships capable of maintaining sustained speeds between 9 and 15 knots were included in the convoys. Faster ships were considered immune and left to sail independently. Ships that could not maintain 9 knots were left to their own fate or occasionally bundled up in slow convoys

along the coast. Neutral ships were at first not included in the convoys, but these were clearly also in danger and after a while were included in the convoys too.

The main outbound Atlantic convoys assembled either in the Thames Estuary, proceeding west through the Channel past Land's End (OA convoys), or in Liverpool, passing through the Irish Sea (OB convoys). The convoys were given A/S escort to a position some 300 miles west of Ireland (between 12 and 15 degrees west), after which one or a few armed merchant cruisers (AMCs), E-class cruisers or R-class battleships remained as protection against surface raiders. Within a day or two, most ships dispersed, steering independently for their destinations.

The inbound convoys from North America (HX convoys) usually assembled in Halifax, Nova Scotia – on average around thirty-five ships at a time. These were brought across the Atlantic by the returning surface protection before being met by the A/S escort, between 12 and 15 degrees west, usually having left an outbound convoy. Off Land's End, the convoys split, one part proceeding up the Channel for the Thames Estuary, the other part through the Irish Sea to Liverpool. Ships for intermediate ports were dispatched en route. Occasionally, Coastal Command aircraft turned up as added protection, at first at around 8° W, but later upgraded aircraft types extended this to about 10° W.



Destroyer *Inglefield* shepherding a convoy. The photo is taken during the summer of 1940. (IWM A.1830)

Ships heading for the South Atlantic, the Mediterranean or West Africa were grouped in the OG convoys in the western end of the Channel, usually every eighth day. Inbound convoys from Gibraltar were prefixed HG, while those sailing directly from Sierra Leone with ships from the South Atlantic and Africa were known as SL convoys. Beyond Sierra Leone, most ships sailed independently.

Prior to departure, the masters, chief engineers and senior W/T operators of the merchantmen were called to a conference. Here, the position of each ship in the convoy was given as well as speed, signal codes, zigzag patterns and how to act in case of attack. The masters were issued with a booklet termed 'Conduct in Convoy', which gave instructions regarding anything from how to leave harbour to how to act during 'man overboard' or fog.[3] Commander Jack Broome of the destroyer *Veteran*, who was to become an expert on convoy escort, wrote:

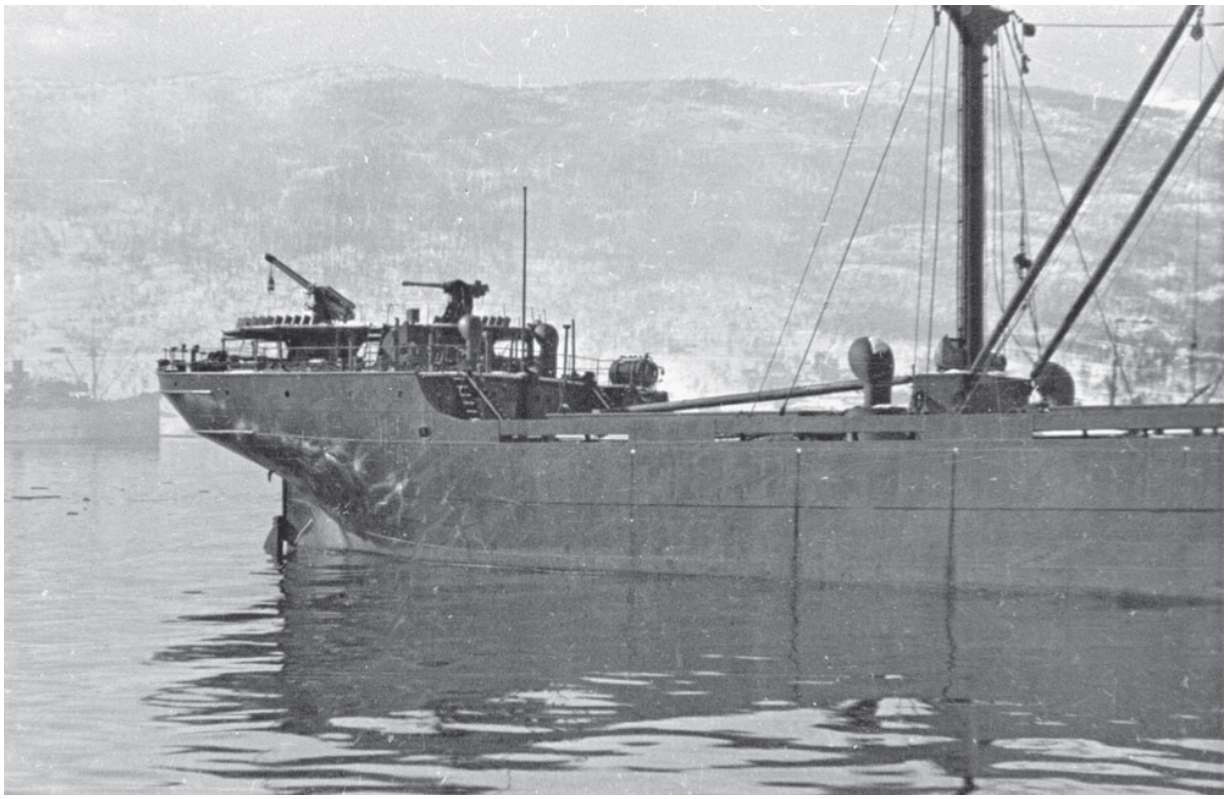
> What a lot we had to learn the hard – and only – way. Every trip provided something new in convoy technique. For the escorted there was the disturbing feeling of having ships all round them all day and, worse still, all the blacked-out night. It was one thing for experienced naval officers to explain to inexperienced merchant skippers in a nice warm lecture room that, in convoy, if you held your course and speed you had nothing to worry about. On a dark night or in fog, imagination soon produced plenty. […] Then there was the domestic sheep-dog angle to learn, forming the freighters up, often with other ships joining at sea. Next, the essential practising of large turns, as soon as the complete convoy was formed. After that, the long haul, with a scratched escort battling weather to keep alert and in station around its flock.[4]

Each convoy, whether coastal or long range, was under the order of a commodore on board one of the merchant ships, usually a cargo-liner with passenger accommodation. His was the responsibility to ensure that the merchantmen maintained their speed and position in the convoy, changed course in an orderly manner and otherwise obeyed instructions from the escort. The commodores of the Atlantic convoys were often older retired flag officers. On the coastal or North Sea convoys, they were mostly RNR commanders or senior merchant skippers. Their task was far from easy. A

convoy assembled up to fifty ships of all categories and vintages with masters of many nationalities and traditions – every one of them used to going where he wanted in the manner he decided himself. Language problems with masters of neutral ships added to the challenge, as did the weather, which tended to spread the ships and create stragglers. Most of the masters were sensible people, though, and expert mariners, quickly understanding such needs as manoeuvring in concert, signalling and black-out.[5]

Rear Admiral Kenelm Creighton was called back from retirement, given a new uniform and placed on board the freighter *Merchant Prince* to take convoy OA-13 from Southend to Halifax, taking to sea on 1 October:

> [Eventually] our merchant seamen became acclimatized to the deadly monotony of sailing in a convoy always laced with the expectancy that at any instant the savage onslaught of the enemy might break the tension. […] They learned to sleep deeply, if not peacefully, in their off duty hours. But in these early days, it was different. It was doubtful if any officers or men in the ships of OA13 slept anything but fitfully that first night at sea. Their senses were keyed-up to detect the first whisper of danger, for they were not yet indifferent to the challenges of the unknown. With the first glimmerings of dawn, the fears of the night began to subside […] I took advantage of day break to get a little rest. For once out of [the swept channels], my job as commodore would begin in earnest with all the headaches of forming up a clutch of merchant ships – totally unversed in the art of sailing in company – into a compact convoy.[6]



The arming of the British merchant navy commenced in June 1939, organised by the Defensively Equipped Merchant Ships or DEMS section of the Admiralty Trade Division. This was a breach of the Hague Convention and would make them liable to be sunk by U-boats without warning. This photo of the British freighter *Riverton* was taken at Narvik. The gun to the right is a 12-pound 12-cwt in a high-angle (anti-aircraft) mounting. The one to the left in the low-angle mounting is a 4-inch BL Mk IX. The latter has been raised to its maximum elevation to hang the lantern used as an improvised stern light. Note also the boxes at deck level around the guns which were for ready-use ammunition. These were presumably empty in deference to Norwegian neutrality, but to follow the rules completely the guns should have been stowed away. Norwegian authorities looked the other way, though. (Author's collection)

Following the Munich crisis, as a cooperation between the Ministry of Shipping and the shipowners, British ships taken into yards for routine maintenance or repair had their after decks strengthened and gun mountings welded in place. Meanwhile, over three thousand guns were made ready for mounting, largely 4- or 6-inch from warships broken up during the 1920s.[7] In June 1939, the arming of the British merchant navy commenced, organised by the Defensively Equipped Merchant Ships or DEMS section of the Admiralty Trade Division. The arming of merchant ships was not in accordance with the Hague Convention and would make them liable to be sunk by U-boats without warning. That the guns were mounted aft and defined as 'defensive' made no difference. Running away from a surfaced U-boat, radioing for help while opening fire would inevitably be considered 'offensive' by the Germans.

The gunners, usually naval reservists, were known as DEMS ratings. At first, neither they nor their guns were much welcomed on board the merchant ships. Many sailors, with some justification, considered their best defence was to retain an obvious non-combatant status. Other masters made sure the gunners integrated with the crew and allowed no maltreatment. One of the officers, usually the third officer, would be responsible for the guns and their crew, whether they were DEMS or members of the original crew, and he was usually assisted by an NCO or a retired Royal Navy gunner recalled for duty. By mid-1940, some six to eight thousand DEMS men were at sea and about twice that number of merchant sailors trained to assist them. Theirs was a life of two extremes: endless periods of boring duty, keeping watch on deck in all kinds of weather, broken by sudden incidents of terror, often ending in death or mutilation.

The DEMS ratings were often required to operate, or attempt to operate, a number of 'miscellaneous' weapons systems in addition to their guns. One such device was a cable with a grenade at one end and a parachute at the other, meant to be fired ahead of an attacking aircraft. There is no record

of any aircraft being brought down by this parachute aerial cable or PAC, and the fact that the crate holding it was marked with ‘lethal to ships personnel in strong wind’ probably says it all.

On 6 December 1939, Churchill informed Parliament that over a thousand ships had been armed, and the effort continued relentlessly. How necessary this was, taking up yard capacity, compared to intensifying convoy efforts and equipping ships that would have capacity as convoy escort, is arguable. With hindsight, it is possible to see that, had British merchant ships remained unarmed, the escalation of the U-boat war might have been delayed and thus saved ships and men during the first critical phase while defences were developed.[8]

Coastal Convoys

In the 1930s, many of Britain’s imports were distributed from the ports to the customers overland, including via railways, waterways and, to a lesser degree, roads. By 1939, this network was overloaded and could not take the increase necessitated by the outbreak of war. Hence much of the transport system had to be re-routed to ships taking cargo of all kinds to and from ports of opportunity. This fleet was as heterogeneous as could be: older coal-fired and steam-powered ships mixed with newer, largely diesel-engined. In size, they ranged from a few hundred tons to a few thousand, the typical collier or freighter being some 600–800 tons. Although moving in sight of land for most of the time, travelling up and down the British coast was not necessarily less perilous than taking to the wide oceans. Shallows, sandbanks, changing tides and unpredictable currents made inshore navigation challenging, as did fog and foul weather – to say nothing of mines, aircraft and U-boats introduced by the war.

The first coastal convoy was organised on 6 September, one day after the sailing of the first deep-water convoy. Along the east coast of Britain, convoys would run almost daily for the next five and a half years and

become a war of its own, impervious to what happened on the other fronts. In the south, the Thames Estuary became the principal assembly area for the coastal traffic, controlled from Southend. Here, goods were redistributed between the coastal and seagoing ships, or the incoming deep-water freighters were added to the coastal convoys to save their cargo from being reloaded. In the north, Methil in the Firth of Forth became a key pivot point for the coastal traffic as well as that across the North Sea. Northbound convoys between Southend and Methil were designated FN, southbound FS, plus an individual number.

Ships of less than a thousand tons and those not capable of sustaining the minimum speed were in principle left to themselves, at grave risk. Those that could travel at over 15 knots were considered immune and advised to travel independently. Speed did not help much against mines, though, and most captains of fast vessels routinely preferred to slow down and stay in a convoy. Other small ships also tagged on for safety and the limit of thirty-five ships per convoy was regularly exceeded, sometimes doubled.

Lieutenant Commander Walter Phipps of destroyer *Woolston* experienced the hard work of escorting a coastal convoy on 11 November, approaching a turning point off the Norfolk coast:

A vessel with very strong light in the mist made it extremely difficult to see what was going on. Difficulty was increased by a Dutchman who shot across the line from starboard side and a non-convoy ship who pushed up between us and the line. Just before the turn at Newarp the Commodore elected to alter course rapidly to starboard and we, who thought he was about to alter course to port suddenly found him draped across our bow. Full speed astern just in time and stopped her feet short. Got badly mixed up with the second and third line and when clear, went up inside them. We had overshot our turning point at Newarp and were rather far too eastward. Added to this a very strong tide across Haisborough Gat set us up and we sighted the shoal buoy to port instead of starboard. Commodore and number two and three in line were to starboard of us and saw that at the same time. They altered course to port and ran straight across our bow, swearing like troopers at each other to get out of the way. Went astern and stopped here while we thought what to do and eventually decided to run back across the bottom of the shoal and on to the swept channel again. A beastly job and when we got there were coming in at right angles to the line of traffic and had to go full astern against the

ships concerned made no attempt to give us sea room. Stopped for a bit and cleared the ships concerned then got ahead and all was more or less plain sailing.[9]

Fog was a constant issue on the east coast at all times of the year. If the fog became too bad, the whole convoy would be ordered to anchor, more or less where they were, waiting for things to improve. More often than not, this would develop into a nightmare for the escorts. Some ships dropped their anchors immediately, some drifted around, waiting to hear if the other ships had really started to drop their chains, some tried to get out of the main line and find a quiet place of their own. Collisions were frequent, and some ships ventured into non-swept areas, risking themselves as well as the escort trying to guide them back to safety.

In harbour, the convoys needed strict and competent handling. The arrival of a large number of laden ships at the same time is a challenge at the best of times, and now the east coast ports themselves constituted primary targets for the Luftwaffe, even before the fall of France. Berthing facilities, cranes, warehouses, yards and docks were all stretched to the limit.

Due to a lack of minesweepers, sweeping was largely done in daytime, focusing on keeping marked channels clear. The convoys moved by night as well, though, and sweeping in and out of port was limited. In general, the sweeping was not coordinated with the convoy movements and new mines were as often as not detected by an unlucky ship, usually sailing independently, hitting one. The loss rate of independent ships to mines was six to seven times that of ships sailing in convoy in the first four months of 1940. The ‘Q’ system of issuing warnings of minefields applied in a strict sense only to warships.[10] In most cases the Naval Control Service would also forward the warnings to convoy commodores in the area, keeping them informed and able to discuss the route of the convoy should the escort commander fail to react. Hence, those sailing in convoy had the advantage of their escort being updated on mine danger areas, whereas those sailing

independently did not receive this information. One may wonder why the positions of the known minefields were not broadcast publicly, as it could be taken for granted the Germans knew exactly where they had put their own mines and had little to gain from listening in.[11]

The German U-boats were not comfortable operating too close to the east coast of Britain. Defensive minefields added to dangers of shallows, and difficult currents meant that the trade routes in the east were largely left to the Luftwaffe and, later, after the occupation of France, the S-boats. Except for the very successful mining campaign in 1939, few ships were sunk by U-boats on the British east coast. In the early months, some were sunk in the northern part of the Channel, but these were sailing independently off the coast.

North Sea Convoys

To protect their own and chartered ships from Scandinavia to Britain, including ore freighters from Narvik, the Admiralty introduced a convoy system across the North Sea a few weeks into the war. From the first week of November, fish, butter, meat, timber, pulp, aluminium, ferro-alloys, minerals and other commodities were sent by railway or coastal ships to Narvik, Trondheim, Bergen and Gothenburg and loaded onto British or British-chartered ships. Following neutral sea lanes to collection points in south-western Norway, they were eventually assembled in convoys and escorted across the North Sea.

Most of the convoys, known as ON to Norway and HN back, sailed between Methil and various points of entry to the Inner Leads off Bergen.[12] In early February 1940, after initially working on an eight-day schedule, the volume of trade forced an increase to a four-day cycle from convoy ON-10, weather permitting.[13] The first convoys were rather small, while during the winter they swelled in size to around thirty to forty ships each, including neutrals. In all, twenty-five convoys sailed from Scotland to Norway and

twenty-eight from Norway to Scotland between November 1939 and April 1940, when the German invasion of Denmark and Norway severed the traffic.[14]

A convoy for Scotland leaving Norway off Frøysjøen north of Bergen. At least two Royal Navy destroyers can be seen. (Riksarkivet Kom-adm-eske 945)

In Norway the convoys were administered by the NCSO in Bergen. The office of Captain Harris-St John was the largest such organisation in Scandinavia and, assisted by British consuls in the smaller ports between Stavanger and Trondheim, organised the convoys in and out, ensuring papers were in order, pilots standing by and so on. The Norwegian government was at first reluctant to consent to the organisation of what was obviously an advantage to one of the belligerent nations from one of their ports. Norwegian ships were sunk in significant numbers by German U-boats and mines though, and in mid-November, the British Legation in Oslo was quietly informed that Norwegian authorities would not object to the practice, 'provided no British warships entered neutral waters' and Norwegian ships would be allowed to join the convoys. Officially, the Norwegian naval authorities in Bergen followed a restrictive line towards Captain Harris-St John and his staff. Unofficially, though, Rear Admiral Carsten Tank-Nielsen, Commander of Sea Defence District No. 2 (SDD2) was 'most helpful', maintaining very positive relations with the British NCSO, providing advice as to the best routes to take while inside the Leads as well as forwarding signals to the convoy and providing intelligence of German U-boats sighted in the North Sea. He also discreetly afforded Norwegian naval escort of the convoys while inside territorial waters. The incoming convoys were usually met at the territorial limit by a Royal Norwegian Navy (RNN) torpedo boat and taken into the Leads while the British escort picked up another set of ships to be escorted back to Scotland.[15]

On the British side, the Scandinavian convoys were administered by the C-in-C Rosyth through the Naval Control of Shipping Office at Methil in collaboration with C-in-C Home Fleet. Many neutral ships carrying goods between Britain and Scandinavia would also seek protection in the ON/HN convoys. The minimum speed of 8–9 knots established for other convoys was routinely waived due to the multitude of ships seeking protection. The

many neutrals tagging on caused particular problems as they were not in possession of the maps, instructions and signal books the British masters had been provided with. This was to some extent overcome by the NCSOs in Bergen or Methil providing a single-sheet pamphlet with basic instructions and signals, handed out prior to departure. Neutral ships were included in the convoys, provided the ships 'traded with or for the British Empire or Allied countries'. Neutral ships not carrying what the Germans would consider contraband would, at least into the first months of 1940, feel safe travelling independently, well marked and with lights on at night. The fact that neutral ships were permitted to sail independently in British waters made them vulnerable to mines and added to the policy of restricting the Q-message mine-warning system to the convoys, this resulted in greater losses from mines among the neutrals than necessary.

Contrary to the Atlantic convoys, the Scandinavian convoys were adequately escorted by potent A/S destroyers. Four to seven Home Fleet destroyers and one C-class A/A cruiser and/or a submarine usually made up the local escort for the convoys. Most convoys were also screened by a covering force of cruisers, keeping to the south. Occasionally, capital ships of the Home Fleet would also be at sea, covering the sailing from a distance, usually to the north-west. Air cover was also provided at times over the western part of the crossing. Weather was appalling during the winter, with frequent gales, snow and fog. Progress was slow at times, landfall was hazardous, and many ships lost touch during the nights in crossing.

Commander St John Aldrich Micklethwait of *Eskimo*. (Author's collection)

There were also two convoys directly from Narvik to Scotland, one on 26 October (NV-1) and one on 18 December (NV-2). The gathering of the ore ships into convoys created serious delays though, and on 24 December, the Admiralty decided that fast ore ships to and from Narvik should sail independently and not join the North Sea convoys. This stemmed partly from questions as to who was to pay for the Norwegian pilots, which were compulsory inside the Leads, partly from the belief that the time saved on each round-trip was worth the risk, partly from the problem of providing escort for yet another convoy, and partly from ships sailing towards Narvik in ballast finding conditions inside the Leads challenging and wishing to stay offshore.[16]

The convoys were spread over a number of routes, sometimes by natural causes. Commander St John Micklethwait of *Eskimo* wrote in his characteristic brief style on convoy ON-3 departing on 26 November 1939:

26th Nov. 15:20: Weighed and proceeded [from Rosyth] to Methil to pick up Bergen convoy, *Matabele, Icarus* and *Ilex* in company. 17:00: Convoy ON-3 moved off, weather squally and dark.
27th Nov. Wind North West – fresh
28th Nov. 04:00: West North Westerly gale in full swing, convoy and escort being scattered.
29th Nov. Wind shifted to Southerly and eased
30th Nov. 03:00: Sighted Utvaer Light broad on the Starboard Bow distant 4 miles in bad visibility. Altered course to South West, switched on lights, blew 'U' on the siren and signalled to convoy 'Steer South West'. All ships turned except one, the guide of convoy who struck a reef, but damage was not serious. 07:30: Convoy proceeded into harbour 21 hours late. It is understood that another ship ran aground whilst trying to go into harbour. 07:45: Commenced A/S sweep across the entrance to the harbour outside the three mile limit under the surveillance of Norwegian aircraft. 08:30: Four funnelled Norwegian destroyer appeared and made in English 'Do you want them now?' I replied 'Yes, please' and she bustled back into harbour returning shortly with the homeward bound convoy. 10:45: Took station ahead of convoy HN-3.
1st Dec. The night of 1st –2nd December was very dark and misty and convoy and escort became scattered but was rounded up with the exception of SS *Eskdene*, by the time landfall was made off Ratray Head at 11:00. 18:00 (approx.): Detached *Icarus* and *Ilex* to close *Eskdene* who had been mined or torpedoed.
3rd Dec. 02:30: Pilots boarded convoy inside May Island. 08:30 Secured to South Arm Rosyth Dockyard.[17]

Another Tribal-class destroyer, *Afridi*, was part of the local escort for convoy ON-23 departing Scotland in the end of March 1940. Stoker (Second Class) John Gritten recounted:

Sometimes as many as fifty vessels, many of them neutrals, would gather off Methil in the Firth and *Afridi* and other Fleet units, including *Cairo* and another anti-aircraft cruiser, *Calcutta*, would escort them across the North Sea to the offshore limits of Norwegian territorial waters where we would pick up a returning convoy. When one morning there was dense mist off the Norwegian coast and the convoy was not at the rendezvous, ignoring scruples about Norwegian neutrality, [Captain Vian in] *Afridi* not only crossed the invisible seaward frontier, but nosed his way up Bergen Fjord until we found our flock and led it out of the fjord into the open, but still shrouded, sea. Even on the stoker's mess-deck we knew that this was a breach of a non-belligerent's sovereignty, though no one doubted, from a strictly naval point of view that it was the right action in the circumstances.[18]

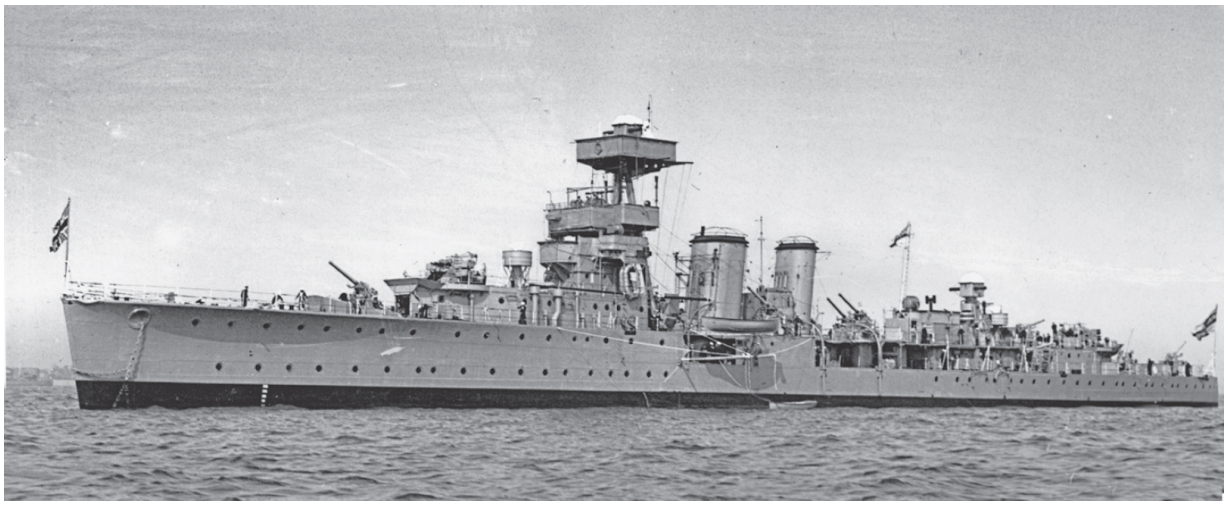
Entering Norwegian territorial waters was not according to regulations. Quite the contrary: if there was time to spare, the escort was instructed to sweep northwards, away from the rendezvous point, looking for German U-boats or merchant ships. The *Cairo* and *Ceres*-class light cruisers were rebuilt to A/A service from 1935. Torpedo tubes and original guns had been replaced by 4-inch high-angle guns and eight-barrel 2-pounder pom-poms with appropriate fire-control equipment to provide warships and convoys with protection against aircraft. The ships, assigned to the 20th Cruiser Squadron, were largely manned by reserve officers and drafted men, but deployed in some of the most exposed areas of the early war.[19] Their deployment with the North Sea convoys was found necessary due to the risk of German air attack, and several A/A cruisers were transferred to the Home Fleet, earmarked for convoy duty. This was not trouble-free; on 24 November, Captain Brooke of *Curlew* reported to C-in-C Home Fleet that:

experience gained in patrol work with the Norwegian convoys has shown that a ship fitted without any weather protection to the guns, deep in the water and without trawler bows is entirely unfit for the work. […] Since the ship was built, the mean draft has increased from 14 feet 1 inch to 17 feet 1.5 inches due to re-arming, fitting of type 79Z [radar set] and counter weight. The freeboard amidships has been reduced to only nine feet. On these patrols where moderate weather was experienced, the upper deck guns were constantly under water and the pom-pom under heavy spray.

[…]. The only guns which could be fought were the super-structure guns, a total of five providing a broadside of only three guns. The ready use lockers were damaged and became saturated with water [and] it would have been impossible to open the ammunition supply hatches on the upper deck in the event of an action. The ship laboured most when steaming ten knots, about the speed of the convoy, with a quarterly sea. During this time the lee rail was almost constantly under water […]. The maximum roll observed was 33º. The continual flooding of the sumps of the guns is leading to stiffness of training [and] heavy leakage.[20]

Admiral Forbes concluded that *Curlew* and *Coventry*, which both had open 4-inch mountings, should as far as possible only be deployed in sheltered waters.

The Scandinavian convoys quickly caught the attention of the SKL, which declared that ships joining the convoys did so at their peril. Still, not a single merchantman was sunk while under escort in one of the Scandinavian convoys.[21] Why the SKL did not send surface forces to attack the Scandinavian convoys is slightly puzzling. A surface attack supported by U-boats and aircraft would have lured British cruisers and capital ships within reach, and proper coordination could well have given excellent results. One can only assume that the covering forces were considered too strong and the risk of losses too high. Instead, U-boat attacks were attempted at times.

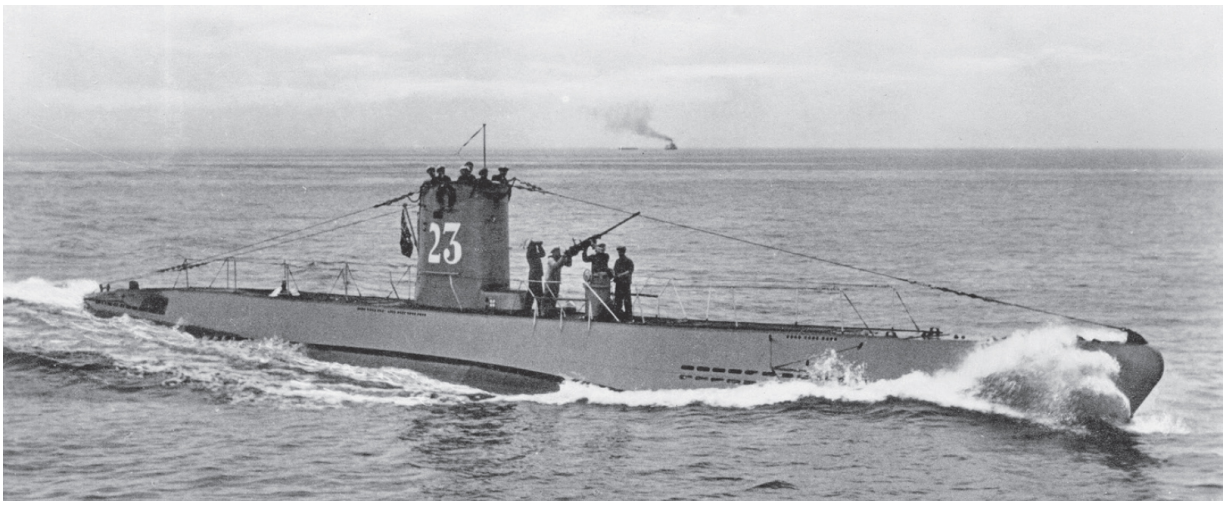


A/A cruiser *Curlew*, May 1937. (W&L)

In the early morning of 18 February, while on the surface some 40 miles east of Pentland Firth, Kapitänleutnant Otto Kretschmer in *U23* ran into convoy HN-12, of about thirty ships, from Bergen to Methil.[22] At the time, the local escort consisted of the destroyers *Daring* and *Ilex* on the port and starboard quarters, respectively, while *Delight* and *Inglefield* were on the port and starboard bow. The A/A cruiser *Calcutta* and the submarine *Thistle* were also in company, while the cruisers *Edinburgh* and *Arethusa* with destroyers covered at a distance. Submarines were often added to the convoy escort at this time, when available, the concept being that they could attack heavy surface ships attempting to harass the convoy, obviating the need to deploy capital ships. Kretschmer noted in his KTB:

> Convoy came into sight at bearing 0º. I steer ahead of it to eastward in order to get away from the moon and have the dark horizon in my back. The convoy, consisting of some twenty ships, is sailing in three columns with a destroyer at each corner. Those ahead are zigzagging. The rear destroyers are maintaining a steady course. Astern and between the two destroyers is an L-class submarine. While attempting to penetrate the convoy from the east and fire a shot at one of the large steamers sailing in the middle, I get caught between the two portside destroyers, so I decide to attack the one in the rear of the convoy. Torpedo fired from 800 m at 03:54.[23]

The destroyer emerging on the starboard bow of the U-boat, less than a mile away, was *Daring*, on station off the convoy's port column. The weather was clear with a bright, nearly full moon and, according to existing instructions, neither *Daring* nor *Ilex* were zigzagging.[24] Kretschmer decided the situation was too good to let pass and resolved to attack. None of the destroyers had sighted *U23* and, being on the surface, she had not been picked up by their Asdics. Brief flashes of light were seen on board the destroyer as the black-out curtains were opened as men moved through them, and positioning the boat for an attack on *Daring* was easy. One torpedo was fired, after which *U23* was turned quickly around heading away, still on the surface. On the way a second torpedo was fired at *Thistle*, but this missed and appears not to have been registered on board the submarine.



Type IIB U-boat *U23*. (Author's collection)

The torpedo from *U23* hit *Daring* on the port side aft. Shortly after detonating, it was followed by a secondary explosion, most probably as her after magazine went up, breaking the destroyer clean in two. The stern section towered up and sank rapidly until only a small part remained visible. The fore part capsized in less than thirty seconds and remained floating for about half an hour.[25] Of the ship's company 157 were lost, including Commander Sydney Cooper. Able Seaman Alfred Wilcox recounted:

> I was at one of the gun stations on the middle watch looking forward to the time when very shortly I should be in my hammock, when suddenly there was a terrific explosion. The ship broke in half. I was thrown to the deck and saw the funnel falling towards me. Luckily it hit the gun and bounced over into the water. Then I went down with the ship as there was a second explosion. I remember rising to the surface to find the sea covered with oil. An air-lock beneath my oilskins enabled me to keep afloat, and I swam round until I came across two seamen clinging to a Carley float. One of them clambered aboard and pulled me and the other man up. It was dark, and we could hear the shouts of other men, but could not see them. The stern of the destroyer had returned to the surface, and I understand that one man clung to the propeller until he was picked up by a destroyer's boat. […] We saw what we took to be a submarine. Thinking it was British, we shouted as hard as we could. Then it occurred to us it might be the U-boat that had torpedoed us. We did not want to be picked up by them, so we stopped shouting.[26]

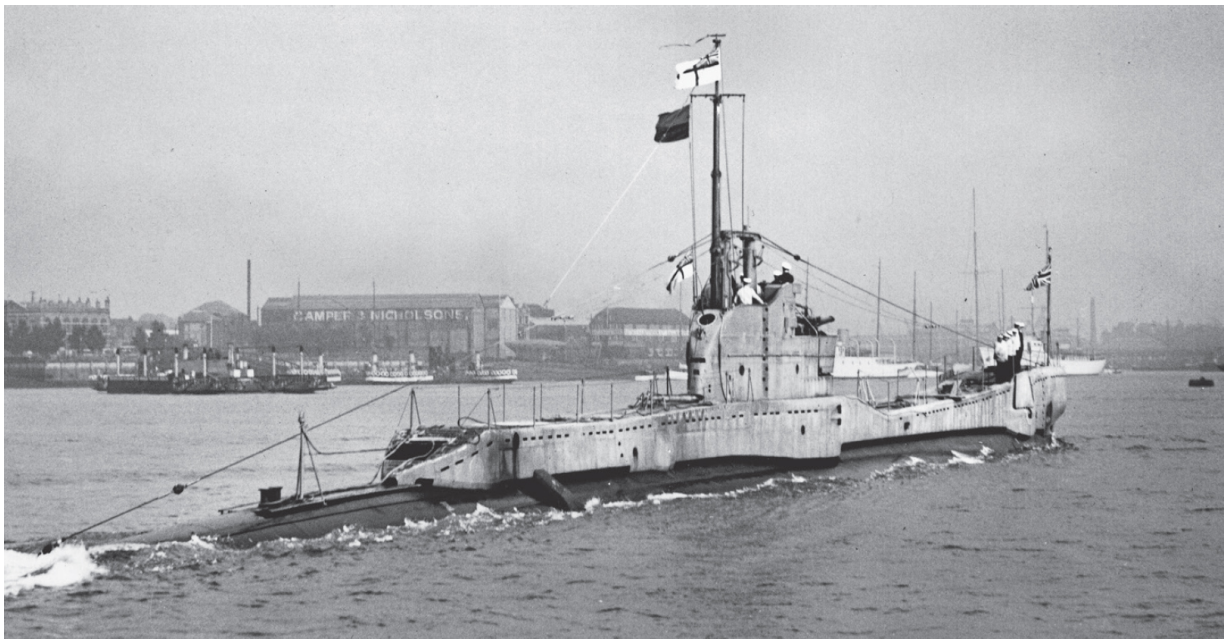
The submarine was *Thistle* and the survivors had been seen. Commander Robert Stirling-Hamilton had just gone below, as all seemed peaceful, when two loud explosions rang through the boat. Believing it was depth-charges from one of the escorts at an Asdic contact, he went above to investigate, but without calling the alarm. The officer of the watch told him that just after the explosions a column of black smoke had risen from the direction in which *Daring* had last been observed, but as the moon was about to set, it was difficult to see much. Closing, strange shapes were seen in the water, but as none of the convoy or the other escorts seemed to react it took some time before the men on the bridge of *Thistle* realised that it was *Daring*, which was nowhere to be seen, that had been sunk. A mine was unlikely due to the water depth, and Stirling-Hamilton realised with a chill

that a U-boat was around. That a torpedo had already been fired at them and missed seems not to have been registered at all:

We circled near the wreck, keeping an eye open for survivors, looking and listening for the U-boat. With no signs of either, I could not close and stop without the risk of the submarine sinking us as well, for he would still be in the dark sector. At the same time I was every moment expecting the destroyer which had been ahead of *Daring* to drop back, but they evidently had heard nothing and it was only after a long pause that we were able to attract the attention of a destroyer to starboard of the convoy [*Ilex*]. She closed *Thistle* and when I had informed her captain of the situation he steamed off to the west saying that he would look for the U-boat while we were to pick up survivors. Unfortunately he lowered no boats and was out of sight before I could ask for them.[27]

Only three men were to be found. One disappeared before he could be picked up, one was relatively safe on board the still-floating stern of the destroyer, while the third clung to a small raft. The latter called that his arm was broken so he could not swim and Stirling-Hamilton brought the stern of his submarine as near to the raft as he dared.

Thistle's RNR Lieutenant [P N Ennor] swam to him with a line. Instead of waiting to be towed alongside, raft and all, which was intended, the man let go and clung to the officer, taking both under water. When the latter had freed himself and grasped the man again, he could not hold him because everything was covered with oil and this unfortunate rating sank and did not reappear. The sea was not rough but the moderate swell made a big motion relative to the submarine's stern and the officer ran a considerable risk of being severely injured on a propeller or other projection and he was bruised, exhausted bitterly cold and disappointed of having lost the man after his gallant effort.[28]



T-class submarine *Thistle*, August 1939. (W&L)

Ilex then returned briefly, lowering two whalers before taking off again searching for the U-boat. This facilitated the rescue work a great deal and the man from the stern (Able Seaman William McBride) was taken care of, although getting him on board the submarine was no easy task in the swell. At dawn it became obvious that there were no further survivors to be found, and *Thistle* and the other escorts out looking were ordered to rejoin the convoy. Picking up speed in the growing light, the raft with Wilcox and his mates was sighted and brought to the attention of a nearby destroyer, to pick them up. The men on the float had fought the cold and the heavy swell throughout the night, clinging to the raft as best they could. To keep spirits up they sang songs and cheered themselves with the thought that they would be entitled to fourteen days' leave. When daylight came there was no sign of the wreck or other survivors, but after some time, to their immense relief, the destroyer *Inglefield* came into view, heading straight for them. By the time they were taken on board, Wilcox and the others on the raft were close to exhaustion and would not have lasted much longer. They were to be the only survivors from *Daring*, in addition to McBride onboard *Thistle*.[29] Kretschmer continued to stalk the convoy from a distance during the day, but ran into several A/S groups and another heavily escorted convoy, protected by aircraft, that could not be attacked during daylight. HN-12 was no longer to be found.[30]

A week later, at 21:00 hours on 24 February, the 3,840-ton neutral Swedish *Santos*, sailing independently from South America to Gothenburg with general cargo, was torpedoed and sunk by *U63* off Kirkwall. Thirty-one persons were lost, while the twelve survivors were picked up by the destroyer *Gallant* the next day, about 50 miles east of Duncansby Head.[31] Meanwhile, the commander of *U63*, Oberleutnant Günther Lorentz received a signal from BdU that he was in a favourable position to intercept convoy HN-14, which had left Bergen for Methil on 22 February. The convoy consisted of fifteen to eighteen merchant ships and the escort consisted of

the cruisers *Edinburgh* and *Arethusa*, the A/A cruiser *Cairo*, the destroyers *Escapade, Eclipse, Escort, Electra* and the minelayer-submarine *Narwhal*.[32]

Following the *Altmark* affair (see Chapter 23), there was increased German air and sea activity in the North Sea. Surface ships were also reported and the Admiralty, wishing a covering force to be available, had ordered the eastbound convoy ON-14 departing Methil for Bergen on 17 February to wait in Kirkwall until *Rodney* and *Hood* with escorts were in place in the area on the 20th. Meanwhile, the NCSO in Bergen was alerted and held HN-14 back, waiting for the escort to be ready to take over and bring this convoy back across the North Sea. Eventually, early in the morning of 24 February, the escort had found most of the remaining ships and the convoy was reformed, steering west. In the early morning of the 25th, *Electra* and *Eclipse* were detached to go north of the Orkneys with some ships destined for the British west coast. The rest continued towards Methil. At 07:00 the destroyers *Inglefield* and *Imogen* fell in, coming from Scapa Flow. At this time *Escapade* was on the port bow of the convoy, with *Escort* on the starboard bow and *Narwhal* abreast the leading ship of the port column.

At 07:55, east-south-east of the Orkneys, *Narwhal* reported: 'Suspicious object 025 degrees'. Lieutenant Commander Eric Oddie had immediately turned his submarine towards the sighting, working up speed, and Commander Harry Graham in *Escapade* followed suit on receiving the signal. At that time, the weather was calm with a swell from the north and, shortly after, a U-boat became visible on the crest of a swell. Graham held his fire, hoping to get closer, but when it was at some 5,500 yards the U-boat, which was *U63*, dived rapidly.

Narwhal was ordered back to take care of the convoy and get out of the way, while Graham ran on for another few minutes at full speed before slowing down to give the Asdic a chance. Almost at once contact was obtained at 800 yards and he turned to attack. Contact was lost during the

turn, though, the ship still having considerable way on her. Contact was regained, and a second attack was commenced. Meanwhile, *Inglefield, Escort* and *Imogen* were also closing and in their eagerness to deliver the first successful attack the destroyers got in each other's way and contact was lost again. At about 08:30 *Escort* obtained contact and went straight in to attack. After this, Captain Percy Todd of *Inglefield* took charge and formed the four destroyers in line abreast, commencing a sweep. Unknown to the British destroyer captains, *U63* had been damaged by the depth-charges dropped in spite of the melee, and Lorentz was compelled to take his boat to the surface at around 09:55. At the time, *Escapade* was furthest away and ordered by Todd to rejoin the convoy while *Inglefield* and *Imogen* headed for the German, both ships opening fire with their forward guns. *U63* sank within minutes, and *Inglefield, Imogen* and *Escort* lowered boats, picking up survivors. The entire crew of four officers and twenty-one ratings were rescued. One man later died and was buried at sea. During interrogation, some of the officers criticised Lorentz for the handling of the boat, while he criticised his watch officer for not having torpedoes ready in the tubes when attacked, thus rendering *U63* defenceless.[33]

On 8 March ON-18 was attacked by three Heinkels from KG26, but few bombs were dropped and no damage done. On 20 March, both sections of eastbound ON-21 were attacked in the Fair Isle area, as was a group of ships from Kirkwall, joining westbound convoy HN-20. Some of the ships were damaged, but none sank. Similar air attacks occurred during the next weeks on virtually every North Sea convoy, eastbound and westbound. Skuas and Hurricanes stationed on Shetland and the Orkneys or in the north of Scotland combined with the gunfire of the escorting anti-aircraft cruisers, effectively kept the Luftwaffe bombers at a distance and no ships were lost in the North Sea convoys.

— 10 —

No Margin for Error[1]

Commence Merchant War

HAVING CONCLUDED A SERIES of U-boat exercises in the Baltic in June 1939, Dönitz asked for leave after a period of hard work. Raeder accepted this and, on 24 July, Dönitz took off for six weeks at Bad Gastein. On 16 August, however, he was called back to his offices outside Wilhelmshaven. There, orders awaited him to be prepared for an attack on Poland and prepare as many as possible of his boats for war. The U-boats not involved directly in Fall Weiss should be stationed in the North Sea and the Atlantic in case the Allies were to stand by their guarantees to Poland.

In all, fifty-six U-boats were in commission at the end of August. Twenty-six of these were Type VII, Type I or Type IX, more or less fit for the Atlantic; the rest were Type II coastal boats. Nine of the Type II boats and one Type VII (*U36*) were school boats, but most of these were made ready for war as well. Hence, forty-six boats, or 82 per cent of the fleet, could be sent to sea between 19 and 29 August. The boats not at sea were in the yards, not yet ready for active service or being used for training or trials.[2]

For the Polish campaign, Dönitz and his staff moved to Swinemünde in the command ship *Erich Wassner* to take operational control of the U-boats in the Baltic. Meanwhile, Korvettenkapitän Hans Ibbeken took care of the operations in the west from Wilhelmshaven. As soon as it was clear that the Polish Navy would be no challenge, Dönitz returned to Wilhelmshaven, re-establishing his command of the entire U-boat arm at Sengwarden. The

westward move had already commenced during the last days of August, when the pact with Russia relaxed the strategic situation substantially and it became clear that most of the Polish destroyers had left the Baltic. From seventeen boats on 21 August (fourteen Type II and three Type VII) the number of U-boats in the Baltic was reduced to seven Type IIs by 31 August.

In the morning of 3 September, twenty-one U-boats were in waiting positions in the Atlantic, or would be so within a few days.[3] Eighteen were in the North Sea or the Skagerrak and seven remained in the Baltic. The U-boats had been put on alert several times before, including during the Munich crisis in 1938, and most of the crews believed, as they were told, that this was yet another exercise. German newscasts were received, though, and when on 1 September news of the attack on Poland arrived, it was realised that this time things were serious. At 12:56 on Sunday 3 September the *Beginn*-signal arrived from the SKL. One hour later, a signal from Dönitz followed: 'Commence merchant war […] in strict accordance with the instructions of the Prize Regulations.' The news of war created a solemn mood on board the boats. The road ahead would be rough, but there was also a quiet confidence that the U-bootwaffe would come through with credit.[4]

The Type II boats were limited by their radius of action to operations in the North Sea, the east coast of England and the waters around the Orkneys and Shetland. The Type VII boats could operate west of Ireland, the Type VIIB and VIICs as far as the Bay of Biscay, while the larger Type I and Type IX boats could be sent off Iberia as far as Gibraltar and the Azores.

The positioning of the Atlantic boats in singles relatively far off the British coast is somewhat strange. With such a small number of boats available, one might expect that focusing them at the entrances to the North Channel, the St George's Channel and the English Channel would be more meaningful. The Prize Regulations required surfacing, though, and doing

that too close to the coast would make the U-boats vulnerable to attack from aircraft and A/S patrols, so it was felt safer to spread tham further into the Atlantic.

On 1 October, Dönitz was promoted to Konteradmiral and on the 17th he officially assumed full tactical and administrative command through being appointed C-in-C Submarines (BdU), reporting to the OKM. Below Dönitz, Korvettenkapitän Eberhardt Godt was confirmed as C-in-C Operations (Chef der Operations-abteilung), effectively becoming Dönitz's second-in-command. Kapitän Hans-Georg von Friedeburg remained quartermaster or Chef der Organisationsabteilung, responsible for supply and organisation issues, manning each boat and making it ready for its next patrol.[5]

Hopeful that a diplomatic resolution could be found with Britain and France, Hitler had the OKM issue orders for the U-boats to follow the Prize Regulations of the London Submarine Protocol, which Germany had signed in 1936.[6] Under these, submarines were obliged to surface, hoist the signal 'Stop immediately. Send boat with Captain and ship's papers' and verify the cargo and destination of the merchant ship before deciding what to do.[7] If necessary, the instructions to stop could be enforced by a shot across the bow. If no contraband was ascertained, the ship should be allowed to proceed. If the ship was found to be legal prey, measures should be taken to ensure the safety of the crew before it was sunk. Taking the merchant crew into the U-boat was not an option, and if they were far from land, it would be necessary to make an effort to find another ship that could pick them up within a short time. Only warships, troopships and vessels under escort or in convoys could be sunk without warning. The regulations had been issued to all U-boat commanders in the form of instructions known as the 'German Naval Prize Regulations' long before the war. In addition, through a separate order issued in the afternoon of 3 September, French vessels were exempt from all attack, except in self-defence. Hitler was optimistic that it

might be possible to reach a separate agreement with France. The orders were repeated by the SKL on the 6th, underlining that incidents with French vessels should be avoided. To this, Dönitz commented, 'this means the French are treated better than the neutrals.'[8]

For Dönitz, the measure of success for his U-boat arm would be tonnage of Allied merchant ships sunk, and only that. Sinking warships was good for morale and propaganda, but the limited number of U-boats available should, in his opinion, avoid the risk of attacks on them, unless conditions were favourable. The war would be won or lost in the Atlantic, he argued, adding that the Prize Regulations were too much to the advantage of the British and would be well-nigh impossible to enforce fully. Dönitz held from the start that British A/S measures, including hunting groups and aircraft, made it too hazardous for U-boats to risk surfacing during daytime – all the more so as armed British merchantmen routinely opened fire and radioed for help as soon as a U-boat was sighted. In his opinion, it would be better to risk sinking a few neutrals than letting enemy merchantmen escape.[9]

However challenging the Prize Regulations were, many U-boat captains made an effort to follow them and there are several examples of chivalry during the first months of the conflict. Kapitänleutnant Herbert Schultze of *U48*, having sunk the freighter *Royal Sceptre*, approached the nearby *Browning*, hailing the position of the *Sceptre* to its master, instructing him to rush to the rescue of the men in lifeboats. Likewise, Kapitänleutnant Hans-Wilhelm von Dresky of *U33* notified the American freighter *Washington* of the position of the lifeboats from *Olive Grove*, which he had sunk 290 miles off Fastnet on 7 September. He even ran ahead to find the lifeboats and, when he did, he fired Verey lights to guide the American to them.[10]

The rules of the game would change quickly, though. On 24 September, orders arrived from the SKL that French merchant ships should be treated

similarly to British. At the same time, the B-Dienst informed Dönitz that a convoy system had been set up and that the Admiralty had announced that the arming of the British merchant fleet was nearly complete, adding that the ships had been instructed to ram the U-boats, should they come close enough. A week later, on 30 September, the strict observation of the Prize Regulations for ships definitely identified as Allied – with the exception of passenger liners – was lifted through orders from Hitler.[11] On 2 October, constraints were further amended so that any darkened ship encountered between 44º N and 62º N and between 7º W and 3º E at night could be attacked. By 4 October, the non-observance of the Prize Regulations was moved to east of 15º W and by the 19th to east of 20º W. If a ship made use of its radio or opened fire instead of heaving to, the U-boat was at liberty to submerge and attack without further warning.

In a meeting with Raeder on 16 October, Hitler approved that all ships definitely recognised as British or French inside the unrestricted area could be sunk without warning. Tankers were to be sunk whenever encountered, as their cargo would most likely be contraband. In response, Admiralty message 764A of 19 October directed masters of British merchant ships to turn away, increase to full speed and send SSS signals if challenged. In November, Dönitz issued orders to his boats to 'rescue no one […] care only for your own boat […] and the next successes'. For all practical purposes, an unrestricted U-boat war was in effect from the start of 1940 inside the Washington-declared no-go area for American ships, even if a total blockade of the British Isles was not declared until 17 August 1940.[12]

Neutral states were warned of the escalation in a note issued on 24 November 1939 and were advised to follow the example of the USA, keeping their ships outside the 'waters around England'. If they, against the advice, did enter the area, it would be important that they showed lights at night, did not zigzag and, above all, did not use radio. It was taken as a given that neutral vessels were unarmed and would stop promptly if

challenged by a U-boat. Japanese, Italian, Spanish and Irish ships were to be left alone, as were those from the USA and Russia. Greek ships, on the other hand, were considered hostile from December, as most of those operating in the North Sea or the Atlantic were on British charter.[13]

On 6 April 1940, Norwegian Foreign Minister Halvdan Koht told the Norwegian Parliament that fifty-two Norwegian ships had been sunk by German actions so far in the war, totalling 120,000 tons, with the loss of 392 seamen. By that time, thirty-eight Swedish ships had been sunk, thirty-four Danish, twenty-four Dutch, twenty Greek and some forty other neutral merchant ships (see Appendix A).[16]

In November, Korvettenkapitän Klaus Ewerth took *U26* into the Mediterranean, but numerous destroyers and very calm weather prevented mine-laying as intended. After searching for two weeks east of Gibraltar, finding nothing but the 4,285-ton French *Loire* to sink, Ewerth gave up and left for the Atlantic again.[17]

Slow Ahead, Both

In German home waters, the U-boats were allowed to sink any unknown or suspicious merchant ship, after the crew had been given the chance to take to the boats. Observing the Prize Regulations was challenging for the Type II boats, partly because they were in waters heavily patrolled from air and at surface, partly because the boats did not have a deck gun with which to suppress the merchant ships, only a machine gun. At least ten neutrals were sunk in the Skagerrak during 1939. *U4* (Oberleutnant Harro von Klot-Heydenfeldt) sank the Finnish *Martti Ragnar* and *Walma* and the Swedish *Gertrud Bratt*, while *U3* (Kapitänleutnant Joachim Schepke) sank the Danish *Vendia* and the Swedish *Gun* and *U7* (Oberleutnant Otto Salman) sank the Norwegian *Solaas* during the last week of September.[14] Allegations that the ships had attempted to ram the U-boats when ordered to stop and therefore had been sunk, created angry protest from the

Scandinavian capitals. No neutral captain would consider ramming it was argued – not least because most of these ships were small and would have harmed themselves more than the U-boat. From the end of September, operations against shipping in the North Sea were gradually reduced due to the difficulties in adhering to the Prize Regulations.[15] During the winter the restrictions on the U-boats were gradually lifted in home waters too, and the overall number of neutral ships sunk increased.

Compared to the Atlantic, the U-boat operations in the North Sea were unsystematic, and objectives were frequently altered, even when at sea. In part, this had its origin in the short range of the Type II boats and their meagre torpedo or mine load as well as the actual ability to control the North Sea boats based on fairly reliable intelligence, in contrast to those in the Atlantic. A number of U-boats were in place off the British coast, prepared to lay mines as the signal to commence hostilities arrived. Among others, *U17* laid its mines off the Downs, *U15* off Flamborough Head and *U13* off Orford Ness. During the first twelve days of the war, U-boats laid at least sixty-five mines in British waters. Each lay was usually no more than eight to twelve mines, but they caused disruption to the British coastal traffic and diverted naval resources from other tasks.[18]

About half a dozen boats were ordered back with their full complement of mines still intact during the first days of September. Why the boats were recalled is somewhat uncertain, but the postponement of the attack on Poland seems to have played a part, as did the instructions not to provoke France, aborting mine-laying operations off French ports. In addition, a difference of opinion between Dönitz and Raeder regarding the mine-laying had emerged.[19]

Raeder and the SKL wished to strike at Britain's naval capacity in general and its capital ships in particular. Dönitz expected limited results from such activities, but was obliged to concur. Blocking the major naval ports of Britain by mines would commit a large number of U-boats to

coastal British waters for a substantial time, including a number of the Atlantic boats, which would have to carry mines at the expense of torpedoes in order to lay them off the western ports. Dönitz considered torpedo attacks more productive in the long run and did not wish to risk his men and boats in coastal waters. During October, intelligence indicated an increasing number of ships foundering in the minefields, though, and the British appeared to have few means to detect and sweep magnetic mines. The increasing number of malfunctioning torpedoes also made Dönitz more favourable to his boats being used as minelayers, especially as the nights grew longer and weather fouler. Priority was given to naval anchorages and convoy routes with relatively unexposed access such as Loch Ewe, the Clyde, Rosyth, the Bristol Channel and off Liverpool, Portsmouth and Plymouth. The mine-laying operations were considered so challenging, though, that newly commissioned boats or boats with newly appointed commanders were not sent until they had had at least one war patrol with torpedoes only.[20]

For the British Admiralty, the mines came as a surprise, confusing its pre-planned tactics of fighting the U-boats in the open sea. Without realising it, the Kriegsmarine had struck right at the heart of a diffuse British anti-U-boat strategy and significant Royal Navy resources were diverted in staffs and technical divisions in an attempt to stay ahead, without really knowing what they were trying to stay ahead of, through lack of intelligence.[21]

For many U-boat officers, mine-laying was a debatable use of their boats. The task of mine-laying was unpopular with the crews and gave no feeling of success as few of the ships damaged or sunk by the mines were ever observed or even identified. Getting into shallow near-shore waters restricted their operational freedom and was seen as unnecessarily dangerous. Having laid their complement of mines, the U-boats resumed normal patrol routines, but a full load of mines meant a reduced capacity for

torpedoes; depending on the number of mines carried, up to six fewer than usual. Dönitz, in addition, was constantly worried that some of them might be found and sunk or captured so that Enigma code material might come into British hands.[22]

There were two types of U-boat mine in 1939. The TMA (torpedo mine A) was a moored impact type with 215 kg (475 lb) of TNT for use in up to 270 metres (900 feet) of water. They were 3.4 metres (11 feet) long, including the cable mooring-system, and launched through the torpedo tubes. These had to be slightly modified to lay mines as compressed air was injected behind each individual mine in the tube in order to lay them one at a time. A Type II boat could carry up to twelve TMA mines, at the cost of two or three torpedoes.

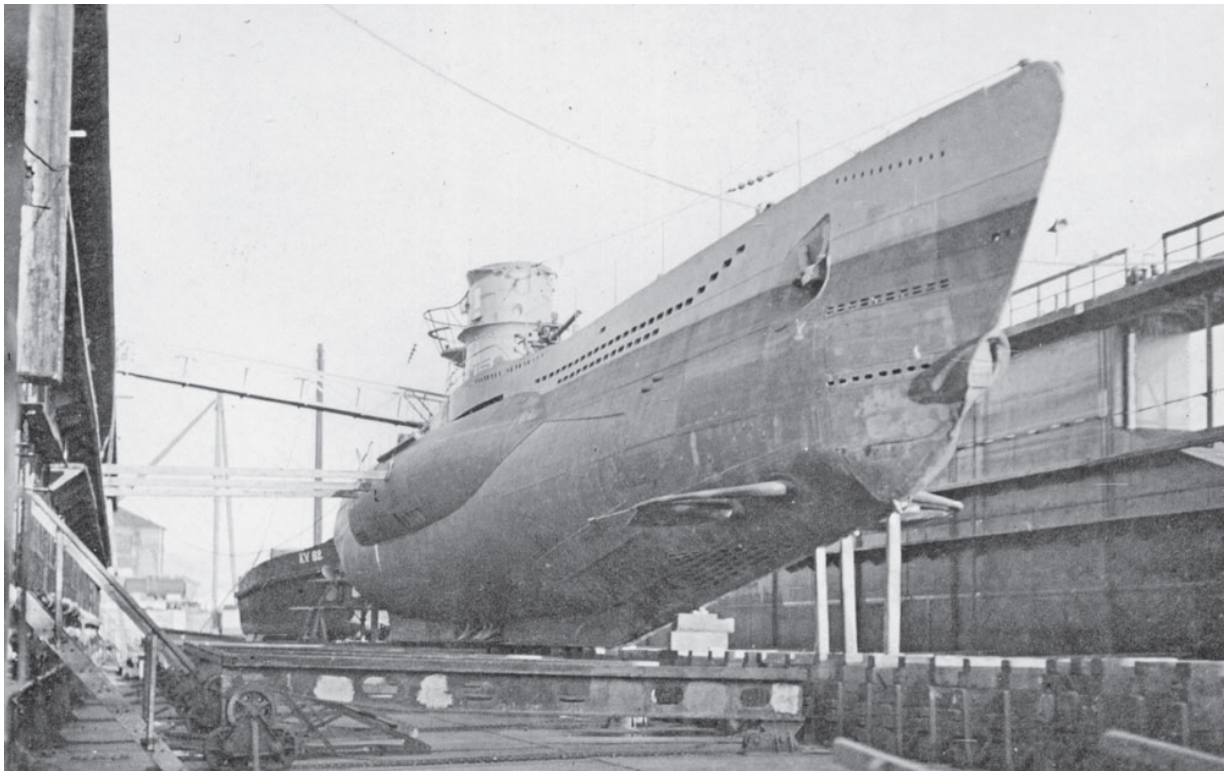
The warheads of the TMAs were soon found to be too small, and from mid-September 1939, they were gradually replaced by the powerful TMB. These were magnetic bottom mines for up to 30 metres (100 feet) of water, slightly smaller in overall size than the TMA as they had no anchoring system. The warhead was 576 kg (1,270 lb) of TNT, larger than most contemporary torpedoes. After some experience and interpretation of intelligence material the maximum depth for the TMB was reduced to 25 metres (80 feet) water depth.[23] In late 1939, a larger magnetic mine, the TMC, became available, with a 1,000-kg (1-ton) warhead for water depths up to 37 metres (120 feet).

Kapitänleutnant Wilhelm Rollmann took his Type VIIA boat *U34* to lay mines at Falmouth Bay just after nightfall on 19 January 1940. The boat carried eight magnetic TMBs, which reduced the number of G7e torpedoes from eleven to five. The mines were loaded into the tubes, two at a time in each tube, before the final approach to the target area. The last tube was filled as late as possible as, with the mines in the forward tubes, there was only the torpedo in the aft tube for attack – or defence. As the mines were loaded, all spare parts, food and other provisions, usually kept aft, were

moved into the central areas of the boat. The laying of the mines affected stability and it would be necessary to have as much weight as possible near the centre of gravity. On the other hand, the torpedo cells were filled with water before the laying commenced, giving the boat negative buoyancy forward to counter the loss of weight when the mines were dropped.[24]

The water of Falmouth Bay is very shallow and everybody on board *U34* knew it would be a risky mission. Tension ran high as they approached the harbour entrance. Through the periscope Rollman could see a guard ship, but they passed unnoticed:

> Left and right rose the heads of the moles and then *U34* was through, inside the harbour, proceeding in a wide arc. 'Mines clear' came from the torpedo room. 'Slow ahead, both.' The whine of the engines rose slightly. 'First mine away.' Scraping and rumbling, it left the boat. Everybody held their breath, listening. Would the British hear the noise? And if so, realise what it was? … They must sleep above. And why not? Harbour is home, safe from the 'damned German submarines' … Third mine, fourth mine, fifth mine … *U34* swings through the harbour. Water depth is 13.8 metres, less than 80 cm left below the keel … 8th mine … once again through the moles and past the guard ship. Water depth increases …[25]



Several of the U-boats were in need of repair and overhaul after returning from patrols, adding to the backlog in the yards. (Author’s collection)

The mines were activated during the night, and the next day, the 7,800-ton motor tanker *Caroni River* activated one of them, sinking close to shore (see Chapter 18). During new moon periods in the autumn of 1939, up to a third of the U-boats were engaged in mine-laying off the British coast. In October, the losses in the minefields soared in spite of extensive sweeping and, though impersonal and unglorified, the mines were every bit as effective as the torpedoes. Thirty-four mine-laying missions were carried out up to March 1940, mines being laid off most major British ports; at first, largely by Type II boats, but as these were withdrawn from front-line service, increasingly by the larger boats.[26]

Strained Reserves

With fewer than thirty Atlantic U-boats available, a maximum of eight to ten was all that could be active in the vast sea room at any one time in 1939, nowhere near sufficient to choke the British supply lines. To avoid having all boats come back at the same time from the first patrol, clogging the bases while leaving the operation areas empty, the first boats were called back only a week after the outbreak of war, initiating a rotational system. By 20 September, only four U-boats were left in the Atlantic, and rarely in the next six months would more than six to eight boats be on patrol west of the British Isles at any one time.[27]

Conditions of war were demanding, and some of the boats coming back showed alarming signs of technical failures not seen during exercises or tests. Longer periods were spent at full ahead, both on diesel and electro engines, the boats dived deeper more often and above all, some had been exposed to depth-charges. Engine mounts came loose, periscopes did not work properly and there were leaks from hatches and valves.[28] Engineering teams at the yards worked shifts to keep the boats in action, but the wear was significant and neither the turnaround time nor the quality of the jobs were always to the liking of Dönitz.[29]

Building of new boats and training of crews also continued, but at a pace well below what Dönitz had requested. New crews were assigned to boats still under completion in order to familiarise them with each other and their future ship as fast as possible. Once the U-boat had been commissioned, acceptance trials were undertaken to check engines and equipment, usually with several returns to the yards for adjustments and improvements. A rigorous operational training period followed, culminating with a spell at the Front Training Group.[30] When declared ready for war, some six to eight weeks after commissioning, the boats were fitted out and sent on their first war patrol.

The results obtained by the U-boats in 1939 and early 1940 may appear impressive, but in fact were rather inconclusive. During the first four months of the war, 125 ships were sunk directly by the U-boats, amounting to some 447,000 tons. By 8 April, a further 119 ships had been sunk for 367,000 tons.

The number of sinkings per week went down once the convoy system had been fully established and the successes were mainly gained against stragglers or merchant ships sailing independently. An increasing number of the latter were neutrals with limited effect on the British war effort. Many boats returned from long patrols without having sunk any merchant ship.[32]

Table 10.1: Allied and neutral ships sunk directly by U-boats (mines not included)[31]

	Total Number	Tonnage	**Neutrals** – of Total Number	Tonnage
3 Sept.–31 Dec. 1939	125	447,000	49	126,068
1 Jan.–8 Apr. 1940	119	367,000	91	244,277
Total	244	814,000	140	370,345

During 1939, nine U-boats were lost. On paper, that was very favourable compared to the number of ships sunk, but the absolute number of U-boats and experienced crews was simply too low to sustain even these relatively moderate losses. Moreover, Dönitz was losing his boats much faster than he was able to replace them. By 8 April, the number of boats lost had risen to twenty-one, while he had only commissioned seven new ones (five in 1939 and two in 1940). Fifteen of the U-boats lost were Type VII or Type IX boats, as were five of the seven new ones, making the net loss of Atlantic boats ten. For the whole of 1940, the estimate of new boats was forty-six, but the majority of these would not be commissioned before late in the year. The U-bootwaffe was about to be decimated, and morale was falling.[33]

Table 10.2: U-boat losses during the first seven months of the war[34]

1939				1940			
Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	1–8 Apr.
2	5	1	1	2	5	3	2

Due to U-boats being given low priority at the OKW there would be no immediate improvement for a long time, all the more so as Raeder and Naval Command would not reduce much of the haste with which the

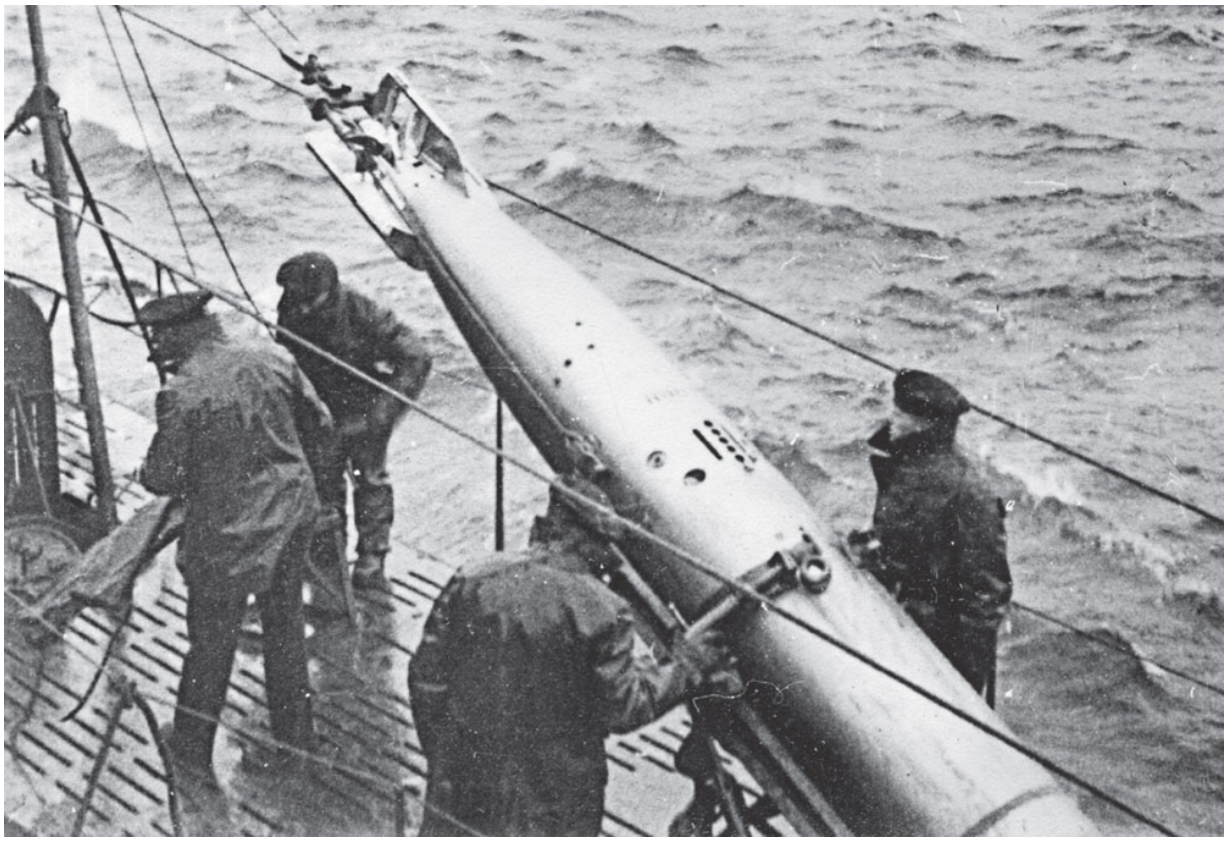
battleships and heavy cruisers were completed or the building of destroyers and smaller ships. In the meeting with Hitler on 23 September in Zoppot, Raeder argued that the U-boat building programme as outlined in the mobilisation plan earlier in the month was insufficient for a sustainable U-boat campaign. At least twenty to thirty new boats were needed every month as soon as possible, even if this would be at the expense of other building programmes for the navy and the armed forces in general. Hitler agreed that measures to increase the number of U-boats were necessary, but before committing to changed priority outside the navy, he asked Raeder to investigate what the Kriegsmarine was willing to sacrifice – battleships, cruisers and so forth – and to come back with specific needs for labour and material to meet the revised production targets.

U-boats of the *Salzwedel* Flotilla in Bremerhaven 1937. All five boats are Type VIIA. *U33* is painted in experimental camouflage pattern, found to be of limited use. (Author's collection)

On 28 September, Hitler visited Wilhelmshaven with Raeder and Generaloberst Keitel to discuss the future of the U-bootwaffe. Dönitz presented the status, concluding that the U-boats had become an instant menace to the British lines of supply. His boats and their tactics were so advanced, he held, that in spite of the operational restrictions and improved Allied defensive technology, the overall advantage was in favour of the U-boats. There was no doubt in Dönitz's mind that the Kriegsmarine possessed the decisive weapon system to hit Britain where it would hurt the most. More boats were needed immediately, however, 300 at least, to take full advantage of this asset. Hitler listened carefully and made promises to make all possible resources available for the building of Atlantic U-boats. This was only the second time that the Führer visited the U-boats and, to everybody's disappointment, he had only set aside an hour to meet the officer corps, before hastening away.[35]

Torpedo Crisis

From the beginning of the U-boat campaign, there were a number of reports arriving at the BdU's office recording with bitterness torpedoes exploding prematurely or not at all, even if they had been heard to strike their target. Numerous merchant ships in addition to *Ark Royal, Hood, Nelson, Rodney, Warspite, Norfolk* and other British warships would escape damage through malfunctioning torpedoes. Within months, the so-called *Versager* (failure) issue reduced the success rate of the U-boats to the extent that it influenced the entire war.[36]



U18 taking on board torpedoes – a strenuous task. (Author's collection)

On 14 September, Kapitänleutnant Kretschmer of *U23* sent three single torpedoes against an escorted tanker under almost ideal conditions off Aberdeen. To Kretschmer's intense frustration, no results were obtained in spite of accurate preparations. He had his officers recheck all firing solutions and, finding no faults, decided that the torpedoes had run deeper than that had been set, passing underneath the target. Three days later, a fourth torpedo also malfunctioned.[37] A detailed report was sent to Dönitz and soon similar reports came from an increasing number of boats. A disturbing feeling began to spread among the U-boat crews that something was seriously wrong with their torpedoes. Worse still, the crews started blaming inept captains and officers who, for their part, accused sloppy torpedo mechanics for the failures, threatening the morale of the whole U-bootwaffe.

The standard Kriegsmarine U-boat torpedo during the early years of WWII was known as G7a. It was a straight-running design, stabilised by a gyroscope with a 280-kg warhead, a little over 7 metres (23 feet) long with a diameter of 53.3 centimetres (21 inches). Propulsion was achieved through the so-called 'wet heat' method where a mixture of compressed fuel gas and water was ignited in a combustion chamber, creating superheated steam that powered a four-cylinder reciprocating engine, driving the propellers. Speed and radius could be adjusted and the most usual settings were 8,000 metres (8,700 yards) at 40 knots or 14,000 metres (15,300 yards) at 30 knots. Whatever the setting, the G7a was noisy and made a long wake of bubbles on the surface, leading back to the submarine it came from.

The wakeless G7e/T2 torpedo, powered by an electric motor with lead-acid batteries, became available during 1939. This left no stream of bubbles on the surface and was virtually silent. Due to unstable performance during tests, though, the electric torpedoes were mistrusted by many U-boat captains; all the more so as the G7e was slower than the G7a and had a

much smaller radius – only 3,000 metres (3,300 yards). Apart from the propulsion, the G7e torpedoes were identical in dimensions and warhead to the G7a.[38]

The detonator for torpedoes at the beginning of WWII was normally a contact pistol, triggering the explosion when the torpedo hit an obstacle. The alternative was to have the torpedo detonate underneath the target by a magnetically activated pistol, damaging the keel and other structural parts of the hull, similar to a magnetic mine. The depth setting of the torpedo depended on the detonator, as the magnetic device required the torpedo to run just underneath the ship.[39]

The OKM seems to have taken the issue of the faulty torpedoes quite lightly at first, probably seeing it as an excuse from over-eager U-boat captains not to follow procedures. On 18 September, Dönitz for the first time indicated in his war-diary that there might be a problem with torpedoes exploding early and that the problem was being looked into 'with all available resources'. A month later, Kapitänleutnant Prien returned to Wilhelmshaven having sunk *Royal Oak*, but having spent seven torpedoes doing so, on a stationary target. Likewise, *U48* returned from her second patrol on 25 October having sunk some 35,000 tons of Allied shipping, but with five of fourteen torpedoes malfunctioning. Worse still, on 30 October, Kapitänleutnant Wilhelm Zahn managed to take *U56* inside the destroyers screening the battleship *Nelson, Rodney* and *Hood*, firing a salvo of three torpedoes on the former from 870 yards. It was heard on board the U-boat that two of these hit the hull of the battleship, but none exploded.[40]

As a stopgap measure, instructions were issued on 1 November to set the torpedoes to run up to 2 metres (6 feet) shallower than usual, to get as close to the target as possible and use only contact pistols.[41] The problems did not go away that easily, and the difficulties persisted. As with other German military machinery, a complex technology not sufficiently robust to withstand the conditions of war produced snags difficult to isolate and

rectify. By early January 1940, the *Versager* issue had reached levels where it affected the whole U-boat arm. Something was obviously wrong and Dönitz ordered a rigorous investigation into the matter by the Torpedo Research Institute (Torpedo-Versuchsanstalt – TVA) and the Torpedo-Erprobungsanstalt (TEK – Torpedo Test Facilities) in Eckernförde.[42] As it turned out, however, the head of the TVA, Konteradmiral Oskar Wehr was himself a large part of the problem. Already in 1937 the TVA had realised that the new torpedoes G7a and G7e steered deeper than intended. Corrections had been attempted through several measures, but the problem persisted. For reasons that are unclear, Wehr declared that the depth-keeping was within acceptable limits and halted further investigations. Reports from Spain, where German torpedoes were used on several occasions, showed the problem was not solved and further tests were instigated in August 1938. In spite of negative results, Wehr once again overruled his staff, declaring the tests invalid and the torpedoes healthy. Why this was so has not been documented. Torpedo Inspector Vizeadmiral Friedrich Götting eventually started to understand what the core of the problem was, as officers at the TVA broke their silence. Wehr was removed from his position and court-martialled.[43]

In the German contact pistol, when the torpedo hit a target, the force was transferred indirectly to the warhead through several levers, making the whole mechanism complex and vulnerable, especially if the torpedo hit at an angle. The trigger mechanism was believed to work at angles of incidence as low as 21 degrees, but actually did not work at angles much less than 50 degrees. Combined with the torpedoes running deeper than expected, this meant that they would often strike where the curvature of the ship’s bottom exceeded this maximum effective angle.

The magnetic pistols were generally unstable and susceptible to mechanical oscillations during running of the torpedo, making it explode prematurely or not at all. The premature explosions were also ascribed to

faulty wiring in the warhead, but when this was corrected, some torpedoes still exploded before hitting their intended target. Neither of these faults came to light before the war, partly due to inadequate testing.

For both trigger types, the combination of repeated diving, often going deeper than in peacetime, and the explosions of depth-charges near the boats most probably also played a role in upsetting the mechanisms. On 21 January, Dönitz wrote in his war diary:

> This is a serious and complex issue. […] It is clear that the usefulness of our torpedoes has been severely limited. […] The trust of the Kommandanten and crews in their torpedoes has been seriously disturbed. […] The loss of sunken tonnage amounts to at least 300,000 tons. […] I will have to apply my entire influence to maintain the offensive spirit of the *U-bootswaffe*, in spite of these setbacks.[44]

It would take a long time for confidence in the torpedoes to be restored; the Norwegian campaign in April–May 1940, where a number of added factors complicated the situation further, would be a disaster. What would have happened had Dönitz had a larger number of U-boats available *and* functioning torpedoes remains speculation, but it would certainly have resulted in crippling losses which Britain and France could only have sustained with difficulty.[45]

To Attack Enemy Vessels

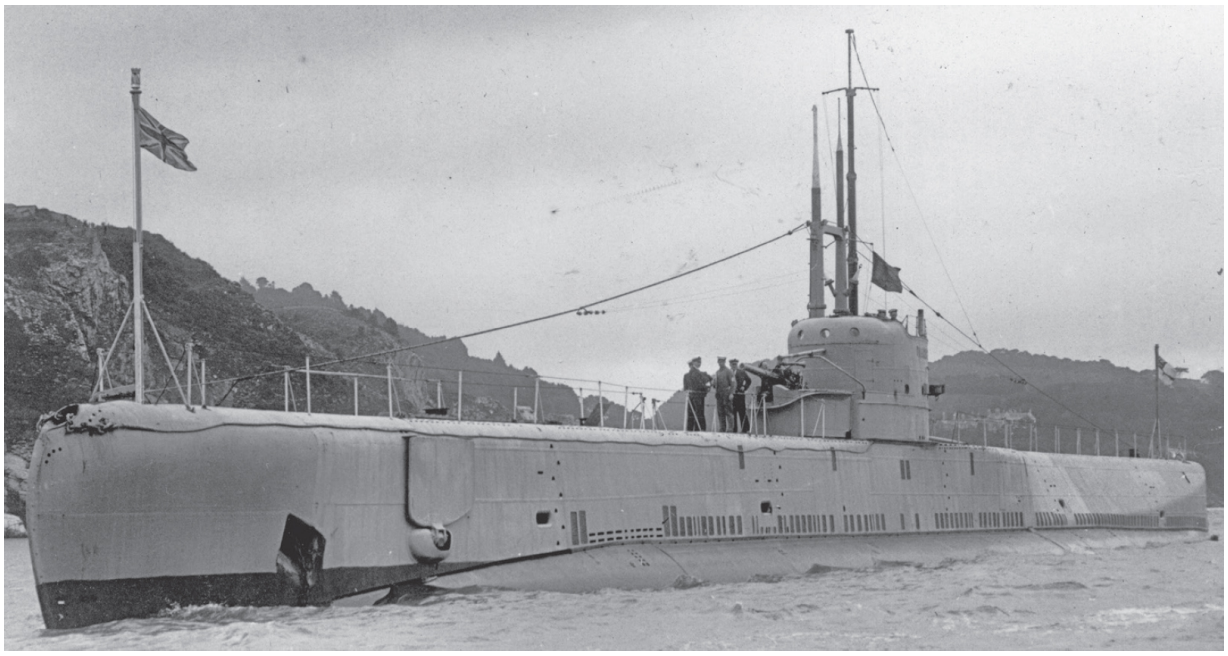
British submarine policy was at best confused after WWI. From 138 submarines in commission at the end of 1918, the number was reduced to forty-four in commission and eleven in reserve by September 1922. Submarines were seen to have a limited role in the defence of British sea lanes, and those of potentially alien nations, it was believed, would be handled by the technology available to the Royal Navy. Hence the submarine arm was not given much priority by the Admiralty between the wars. Exercises were few and when, during those that were held, the British submariners penetrated the screens and surfaced firing red signal rockets,

signifying they were within torpedo range without having been detected, they were dismissed as having acted recklessly. The fact that they – contrary to acknowledged tactics – attacked at night in groups, exactly as Dönitz was training his own men to do, and did so successfully, was ignored. On the other hand, if one of the destroyers passed near a submarine, she was immediately deemed sunk and out of the exercise. Rather than facing the fact that the available technologies were inadequate and developing tactics that might cope, the Royal Navy steadfastly held on to the old concept that the coming naval war would be won by big guns.[46] It was a belief that would cost many lives.

The O-, P- and R-class boats built in the late 1920s were long-range overseas patrol submarines for Far East service. The primary specifications for these boats, nineteen in all, were range and operational sustainability, making them large and unwieldy designs with poor underwater manoeuvrability. An equally awkward concept was the so-called fleet-submarines: large, fast boats for cooperation with battleships and cruisers. *Thames, Severn* and *Clyde* were double-hulled boats with two massive ten-cylinder 5,000 horsepower diesel engines, giving them a theoretical maximum surface speed of 22.5 knots. Submerged, they were capable of 10 knots. Fast, but not fast enough, and with only six forward torpedo tubes and none in the stern, these River-class boats fell significantly short of their purpose, not least because the riveted fuel tanks located outside the pressure hull were prone to leak, giving a devastating telltale track on the surface.

In parallel with the River-class, six double-hulled *Grampus*-class mine-laying submarines were built and launched in 1936 and 1937. These were slightly smaller than the River-boats, but included many of the same concepts and technologies. In addition to the six torpedo tubes, fifty moored contact mines could be carried in a casing above the pressure hull.[47] The mines could be laid quickly and they were to produce important results in the coming war. The boats were large, though, and difficult to manoeuvre,

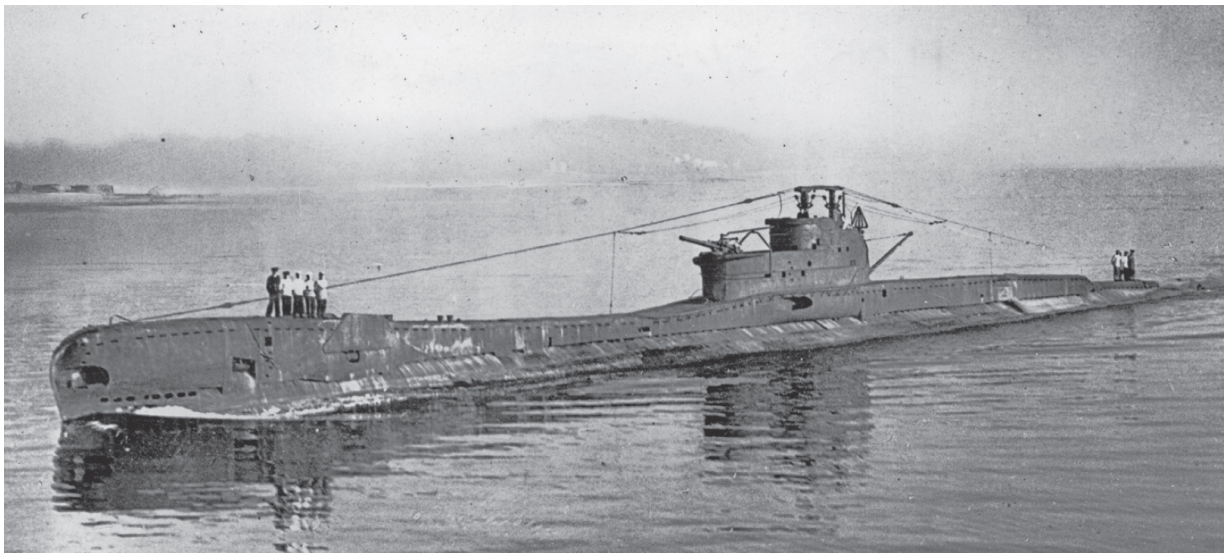
particularly in the shallow waters where the mines were usually laid. Of the six boats built, *Porpoise, Narwhal, Rorqual, Grampus, Seal* and *Cachalot*, only *Rorqual* would survive the war.[48]



Grampus-class submarine *Narwhal* (R Perkins)

Only when the first batch of the S-class boats, designed for medium-range operations in coastal waters, was completed in the mid-1930s did the Royal Navy obtain anything like an efficient tactical submarine. Group 1, *Sturgeon, Starfish, Swordfish* and *Seahorse* were built at Chatham dockyard between 1931 and 1933. Found to be a suitable construction, they were followed by eight more of Group 2: *Sealion, Salmon* and *Spearfish* built at Cammell Laird, *Shark, Snapper, Sunfish* and *Sterlet* built at Chatham, and *Seawolf* built at Greenock between 1933 and 1938. These were capable-looking boats displacing 700 tons surfaced and some 900 tons submerged – reliable, manoeuvrable and quick to dive. Maximum operational depth was 330 feet for the Group 1 boats, increased to 360 for Group 2. The saddle-type fuel tanks were located inside the single pressure hull, reducing the risk of leaks. Six forward torpedo tubes and the capacity to carry twelve torpedoes in all gave these boats a reasonable sting while keeping them nimble and, as would be amply demonstrated, well suited for the North Sea area.[49]

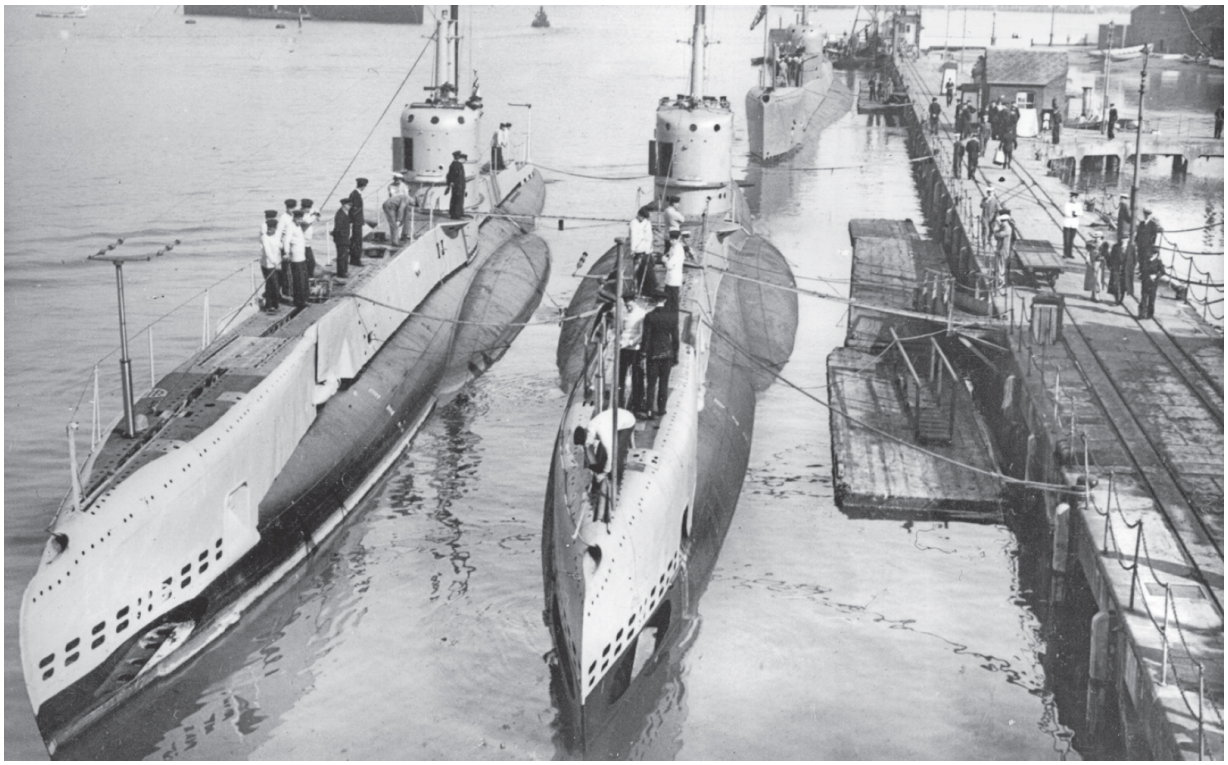
An even more successful design was the 1,090-ton T-class oceangoing submarine. These boats, known as ‘patrol submarines’, were simple but very efficient designs with a powerful armament. They had ten torpedo tubes, six of them internal and reloadable in the bow, two external over the bow and two external at the base of the conning tower, all facing forward, giving an exceptional ‘shotgun’-size salvo. Later, the amidships tubes were moved aft and turned to fire astern. At the outbreak of the war, fifteen T-boats had been completed, and production was still ongoing.[50]



T-class submarine *Truant*. (Author's collection)

During 1937, construction of three small, single-hulled, 650-ton U-class boats, *Undine, Unity* and *Ursula*, started at the Vickers-Armstrong yard. They were originally designed as training boats, but because of the deteriorating international situation it was decided to arm them for coastal operations with four reloadable tubes plus two external in the bow. Single-hulled, they were not certified for more than 200 feet diving depth but their nimble size and quiet underwater operation made them difficult to track and very suitable for inshore service.[51] At the start of the war, the Admiralty decided that the U-class would be suitable for combat, and a further twelve boats were ordered under the 1939 Supplementary Programme. None of these would become operational until late summer of 1940, though.

As the war approached, boats in the reserve began to be manned from the beginning of July 1939, and by 1 September the operational strength of the Royal Navy's submarine fleet was fifty-seven, thirteen of which were single-hulled WWI design.[52] Shortly after the outbreak, all submarines were recalled from the Mediterranean, except the three O-class boats. A further dozen T-class and one S-class submarine were under construction, eight of which would be commissioned in home waters before April 1940.[53]



Newly completed S-class submarines *Sealion* (left) and *Shark* at HMS *Dolphin*, Portsmouth in February 1935. Shortly after, they would sail for Malta. (W&L)

On 30 August, Rear Admiral Submarines RA(S) Bertram Watson moved his HQ from Fort Blockhouse at Gosport to Corriemar House at Aberdour, near Rosyth, for easy communication with the Home Fleet and Coastal Command, while most of the Submarine Staff remained at Gosport. When, shortly after 11:00 on 3 September, the 'Total Germany' signal was received, signifying that the war with Germany had commenced, it was by no means clear how the British submarines were to implement the war – neither in a strategic, tactical nor operational sense. The entire 6th Flotilla, for instance, was sent into the Heligoland Bight without consideration of how they should be replaced when they would all need to head back at more or less the same time. Few commanders of the Royal Navy comprehended that submarines needed to be operated differently from other ships, their most efficient use being a rolling deployment where about half the force was at sea and the other half in transit or in port for recreation of the crew and maintenance of the boats. With more foresight, the 5th Flotilla was instructed to have five boats off the coast of Norway in a manner where they could be released when they had done their time without leaving gaps in the chain.

Initial instructions from the Admiralty told RA(S) to prioritise reconnaissance over attack, yet favourable opportunities to harass the observed vessels 'should not be neglected', provided the safety of the submarine was maintained and the primary task of reporting German traffic was not compromised. These orders were unfamiliar to the submarine crews. In particular, it was found extremely difficult to maintain static position on a patrol line over time due to currents, poor weather and limited opportunities to check their position. Hence revised orders were issued from RA(S) to his boats on 20 September, making it clear that while all German war vessels should be reported as soon as convenient, whether attacked or not, 'the object of all submarines is to attack enemy war vessels', adding that 'submarines, when in their patrol zones, have full freedom of action for

the attainment of their respective objectives.' This was more in line with expectations, and morale on board the boats rose.[54]

Limited German merchant traffic in the North Sea and adherence to the Prize Regulations resulted in few British submarine attacks on German shipping in the first seven months of the war. The number of submarine attacks on U-boats in transit through the North Sea, though, and in particular the successes of *Salmon* and *Ursula* in December, made the U-boats proceed underwater at fixed times through a few set routes, make diversions or wait for escort, slowing down German operations and diverting resources. Later, after the German occupation of Denmark and Norway on 9 April 1940, when the Prize Regulations were lifted, the supply lines to Norway became prime targets, forcing the Kriegsmarine to allocate significant resources for A/S protection of their own convoys.[55]

— 11 —
A/S Striking Forces

An Outstanding Target

FROM THE START OF the war, C-in-C Western Approaches Admiral Dunbar-Nasmith argued strongly for the allocation of additional destroyer resources, which would enable him to set up a number of offensive striking forces roaming offshore, hunting U-boats and responding at speed to any sightings or attacks. To attain this, he was willing to reduce the number of destroyers directly assigned to escorting convoys through the Western Approaches. Similar proposals from other commanders wishing to act aggressively followed throughout the winter. The seniors in the Admiralty saw things differently, and DCNS Rear Admiral Phillips wisely concluded that the U-boat menace would:

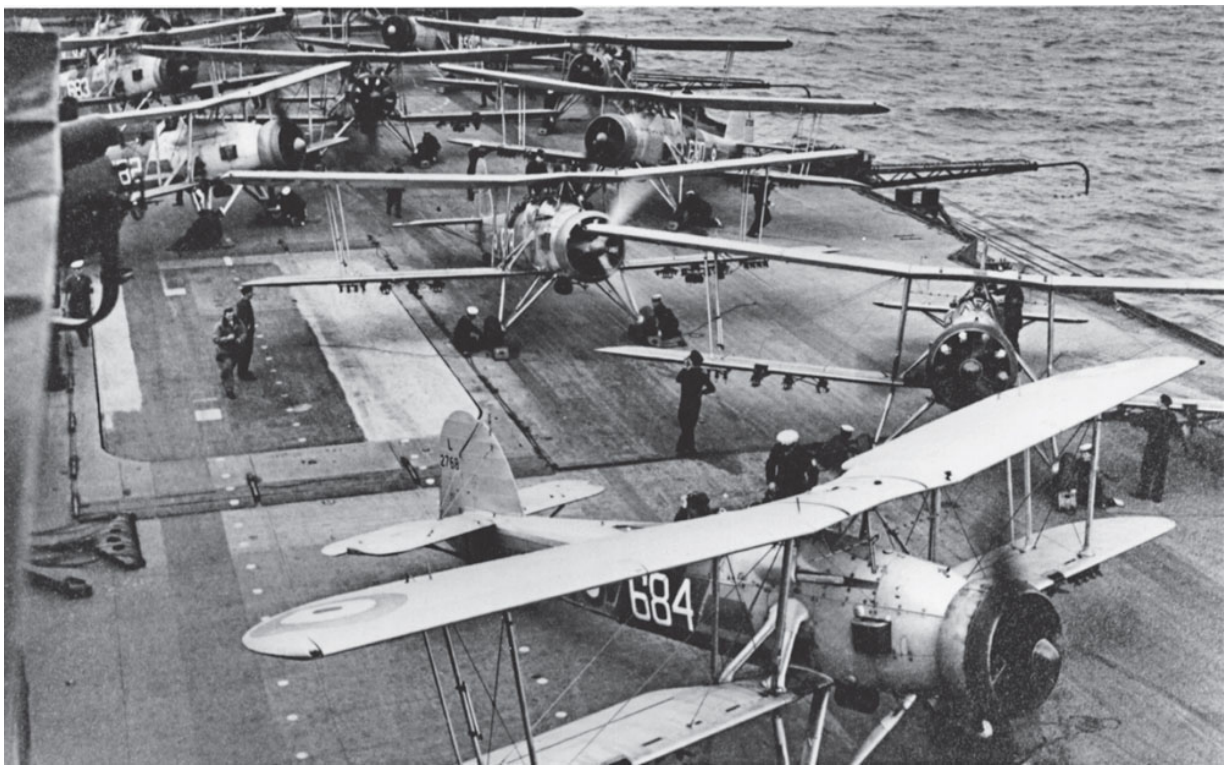
> only be finally dealt with if we can reach a position in which any submarine that attacks a convoy has, say, a 60% chance of being destroyed. We can only do this if we have more escorts with our convoys. On the other hand, once the trade is wholly in convoy the submarine can only do real damage if he comes near the convoy and tries to attack it. The obvious position for the available anti-submarine vessels is therefore, in my view, with the convoys, and I consider that they are much more likely to get a chance of sinking submarines there than if they are wandering about the ocean as striking forces.[1]

This was not common thinking in the Royal Navy. 'Nothing can be more important in the anti-submarine war', Churchill wrote, 'than to try to obtain an independent flotilla which could work like a cavalry division on the approaches, without worrying about the traffic or sinking of U-boats, but search large areas over a wide front.'[2] In June 1938, Churchill had been

invited to a demonstration of the Asdic system off Portland by First Sea Lord Admiral Chatfield. The undoubtedly well-planned demonstration went well and an impressed Churchill wrote to Chatfield that with the new equipment, the Admiralty had 'relieved us of one of the greatest dangers. What surprised me was the clarity and force of the Asdic indications […] I never imagined that I should hear one of those creatures asking to be destroyed. It is a marvellous system and achievement.'[3]

Though Churchill later admitted that he was carried away and overrated the efficiency of the equipment, forgetting 'for a moment how broad are the seas', the demonstration put him firmly on the side of those who believed that the Royal Navy possessed the perfect A/S weapon system. Logic said that if the merchant ships were collated in convoys, the best chance for catching the U-boats would be near the convoys. The thought of keeping station on a slow-moving convoy, waiting for the enemy to come to them, was against all conceptual thinking among the RN officers, however. A/S work was considered tedious, and officers who took this job seriously between the wars risked jeopardising their careers.[4]

In parallel with inviting Churchill to Portland, the Tactical Division of the Admiralty issued a memorandum, summarising how the A/S defence of the British Isles should be conducted in case of war with Germany. A lengthy analysis, including mathematics, concluded that hunting groups were needed, consisting of a minimum of four vessels capable of no less than 15 knots, supported by half a dozen aircraft that would 'keep down enemy submarines and thereby save merchant ships from attack'.[5] The aircraft in the memorandum were envisaged to be land-based, but few if any with effective radius for such operations were available and from his arrival in the Admiralty, Churchill urged the Naval Staff to form carrier-based 'hunter-killer groups', extending the operations into the Atlantic.



Swordfish aircraft warming up their engines, preparing to take off from *Ark Royal*. At this time, the flight deck was a dangerous place to be. (IWM L2768)

It was recognised that the carrier would be ‘an outstanding target’, but it was anticipated that the Swordfish aircraft would keep any U-boats coming close below the surface, where the destroyers would discover them with their Asdic and dispose of them. It was fine in theory, but the destroyers would be sent away from their stations chasing U-boat reports or answering distress calls from merchant ships, rarely leaving more than two escorts with the carrier. To operate its aircraft, the carrier would be required to maintain a steady course for an extended period of time, for which two escorts were far from sufficient. A concept of ‘attacking U-boats with hunting groups until it became necessary to go into convoy’ had existed in the Admiralty before the war, but it appears that no preparations for this had been initiated beyond the Plans Division. Hence, the aircraft carriers available to the Home Fleet at the outbreak of war – *Courageous, Hermes* and *Ark Royal* – had never trained for A/S work and their officers had a limited operational understanding of the job at hand. Nevertheless, the three carriers were sent into the Western Approaches, *Ark Royal* to the north, *Hermes* and *Courageous* to the south. During daytime, all-round air searches were carried out to a distance of up to 60 miles. If a U-boat were sighted, the aircraft were supposed to attack, forcing it to dive, while destroyers would be dispatched from the carrier screen. In theory it was an immaculate concept that did frustrate the U-boat captains who came within the air searches, but the aircraft had no means of maintaining contact with the U-boat once it had dived and, by the time the destroyers arrived – often delayed by poor weather – there was usually nothing to find. Meanwhile, the carrier had become vulnerable through the reduction of her screen. It is difficult not to judge the hunter-killer groups as anything but mistakes that did not justify the risks involved and should never have been initiated in the manner they were.[6]

Fanad Head

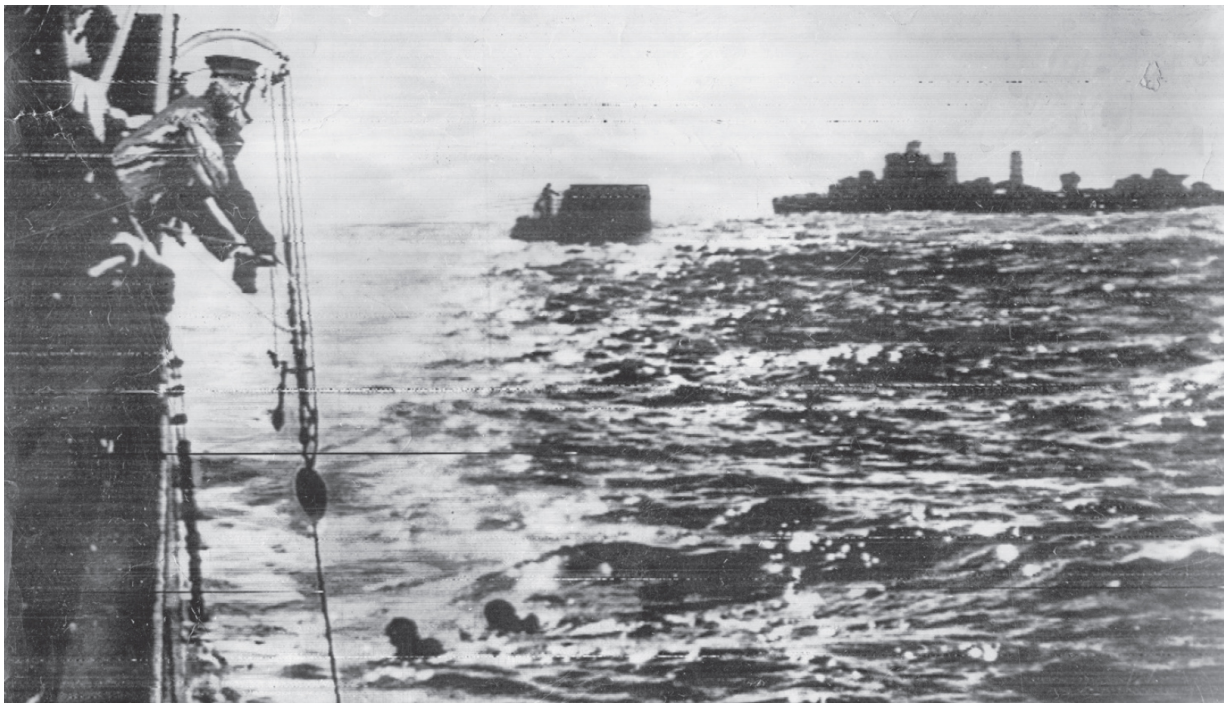
In the morning of 14 September, an emergency signal was received on board *Ark Royal*, at the time west of the Orkneys, screened by destroyers *Tartar, Bedouin, Punjabi, Fame, Forester, Faulknor, Firedrake* and *Foxhound*. The signal was from the 5,200-ton freighter *Fanad Head*, steering for Belfast with grain from Canada. She was being chased by a U-boat some 200 miles to the south-west, off Malin Head. Unknown at the time, the culprit was none other than Kapitänleutnant Fritz-Julius Lemp in *U30*. Since the sinking of *Athenia*, little had happened. On the 11th the 4,425-ton *Blairlogie* had come his way and been sunk – in accordance with the Prize Regulations – and now Lemp was after his third victim.

Tartar, Bedouin and *Punjabi* were detached from the screen and raced towards the reported position. *Ark Royal* and the remaining destroyers also turned south-westward, but at a more leisurely speed, while three Skuas of 803 Squadron were launched to scout ahead. The flight was led by the commanding officer of 803, Lieutenant Commander Dennis Campbell, with Lieutenant Michael Hanson in the back seat. Lieutenant Thurston and Petty Officer Simpson manned the second Skua, while Lieutenant Guy Griffiths and Petty Officer McKay were in the third. They were each carrying a single 100-pound A/S bomb in the fuselage and four 20-pound Cooper bombs on the wing racks. The Skuas headed for Rockall, from where they would turn towards the last known position of *Fanad Head*. Two sub-flights of three Swordfish aircraft each were made ready to launch, should the Skuas locate any targets.[7]

Only minutes after the Skuas had taken off, the alarm was sounded on board *Ark Royal*. Torpedo tracks had been sighted and shortly after 15:00 the large ship heeled over when turning into the tracks. Seconds later, two torpedoes detonated some distance away from the carrier, while a third vanished into the Atlantic.

Faulknor, Firedrake and *Foxhound* immediately turned down the wake of bubbles left by the G7a torpedoes, leading towards the Type IX U-boat

U39 in which Kapitänleutnant Gerhard Glattes was in command. At 15:34, *Foxhound* obtained Asdic contact and attacked with depth-charges, followed by *Faulknor. Firedrake* made a wider approach and came in third. Her charges were set to to explode deep and *U39* was forced to the surface. *Faulknor* and *Firedrake* immediately opened fire while *Foxhound* picked up speed to ram the U-boat. By now the German sailors had started jumping overboard, clearly having lost the will to fight, and Lieutenant Commander Hadow turned away, saving his ship from severe damage. Glattes and his forty-two men were rescued before the boat sank, becoming the first U-boat loss of the war.



U39 sinking. (M Swan collection)

Meanwhile, the Skuas had arrived at Rockall and spread out as agreed, searching for *Fanad Head*. Master George Pinkerton had been following the route given to him by the British shipping officer in Montreal across the Atlantic. Approaching Britain, he was zigzagging during daylight hours and, passing 20º W, he also increased speed from the usual 10 knots to over 11, the most his ship could comfortably sustain:

On the fore noon of the 14th September at 11:10 GMT while zigzagging I sighted a submarine just as it broke surface about four points on my starboard bow, distance 4–5 miles. I immediately altered my course to bring the submarine right astern, sounded my alarm signals, having made previous arrangements with the engine room that three rings meant 'give the engine everything possible'. I gave her everything possible and the ship worked to a speed of about 12½ knots. At the time of increasing speed, [the radio] operator sent a wireless message. The submarine appeared to be overhauling me […] He signalled me at least 5 times using international code, saying 'heave to or I will open fire'. We did not pay attention to these signals but kept going until the submarine was less than ½ mile away [when] I considered it was time to stop my ship and, hauling my flag down, ordered my crew to the boats.

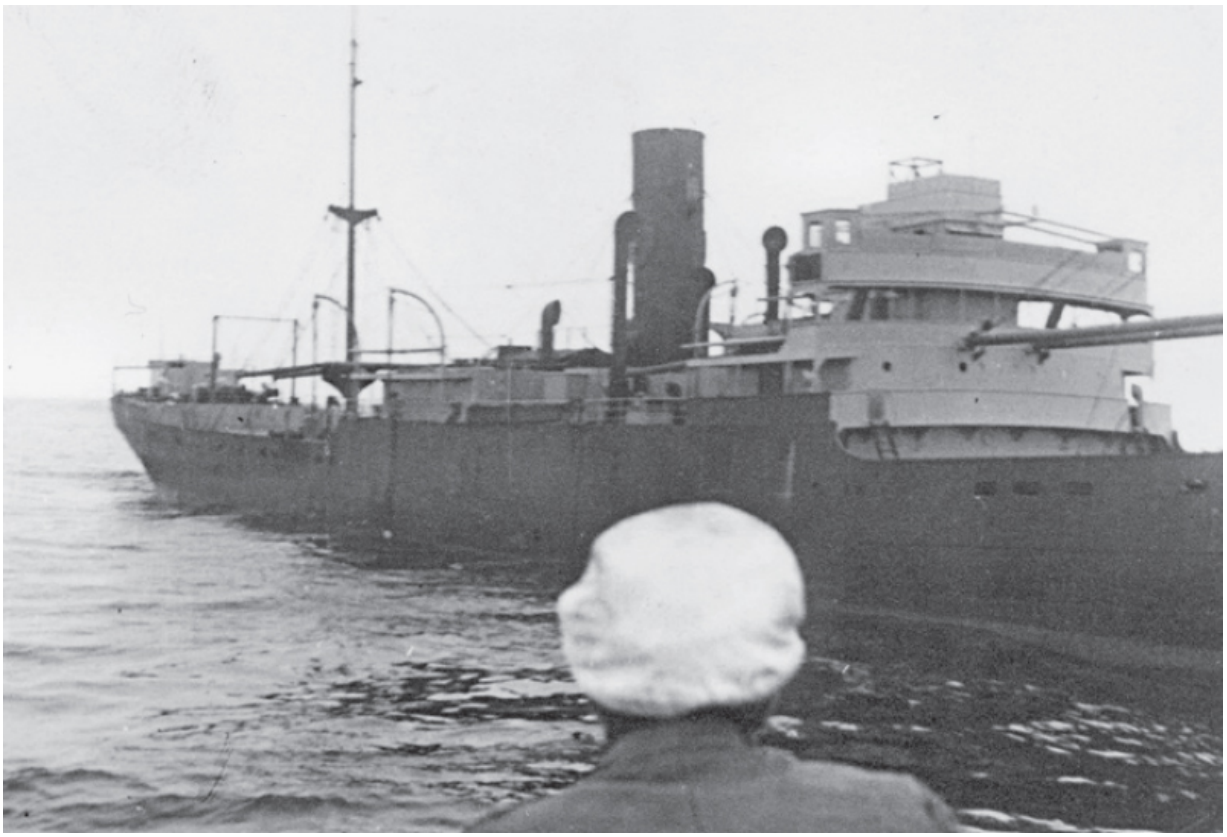
With Pinkerton and his crew in the boats, *U30* approached. Lemp was on the bridge.

The submarine came alongside my boat and the Commander of the U-boat […] who was at least 5 ft 10", dressed in a somewhat shabby suit of grey with no badges or rings but had a cap of good quality and spoke fluent and cultured English with an educated accent […] gave me the British Naval salute and said 'Good Morning Captain' and I replied 'Good Morning'. He said 'I am sorry to rush you this morning, but I am just too fast for you'. He enquired what my cargo was and I replied 'Mostly grain'. He said 'The usual Montreal cargo I suppose' and continued 'An American ship is only 300 miles away, you will be all right. Give me your painter and I will tow you clear of the ship'.[8]

This he did, making sure that both boats were together, a mile and a half from *Fanad Head*. Lemp then took *U30* alongside the freighter, sending four men across to search for fresh food and water and prepare to scuttle the ship. Oberleutnant Hinsch and the sailors Büsgen, Schmidt and Ohse found a lot of useful things, including fresh water, bread and tobacco, and while transferring the goods most men relaxed their attention. Suddenly, the alarm

was sounded: somebody had sighted an aircraft that was approaching low over the water.

This was the Skua piloted by Lieutenant Thurston. Excited by seeing the submarine, he dropped his bombs just as he flew over the two vessels. It is not clear if the 100-pound bomb exploded, but the Cooper bombs did when they hit the water. Shrapnel flew back towards the aircraft, penetrating the fuel tank and setting the Skua on fire.[9]



Fanad Head seen from *U30*. These unusual photos were taken early in the incident after Oberleutnant Hinsch and three sailors had boarded *Fanad Head*, looking for fresh food and preparing to scuttle her. Note that lifeboats have been lowered in two upper photos. *Lower left*, freshly baked bread is wondered at, while to the right the outlook remains vigilant. (H Oertel via John Dell)

Onboard *U30* the surprise was total. Lemp rushed his men below and took his boat down faster than he had ever done before. A single-engine aircraft here in the Atlantic could only mean a carrier was nearby and that meant destroyers too, with depth-charges. One of the crew, Oberbootsmaat Hanisch, did not make it down the hatch in time and was left on the surface when the boat dived. He started to swim towards *Fanad Head* and his crewmates there. Badly burned, Lieutenant Thurston landed some distance away from the two ships. He and Petty Officer (PO) Simpson got safely out of the aircraft before it sank and also set out to swim towards *Fanad Head*.

Meanwhile, the second Skua, piloted by Lieutenant Commander Campbell, also approached. Lieutenant Hanson in the back seat observed splashes around *Fanad Head* and misinterpreted what were almost certainly the bombs dropped by Thurston to be shells from the deck gun of a submarine he could not see. Hanson sent a sighting report to *Ark Royal*, triggering the launch of the six Swordfish aircraft from the carrier as well as the detachment of a further two destroyers, *Fame* and *Forester*. Closing *Fanad Head*, Campbell and Hanson saw something in the water which they believed to be the tower of a U-boat and dived to drop their bombs. What they most probably saw was the dinghy used to transfer the goods from the freighter to *U30*. Its line had been snared by the U-boat when it dived and it was being towed behind, revealing the boat's position as it moved below surface. Two swimmers were also seen in the water, but not recognised as Thurston and Simpson.

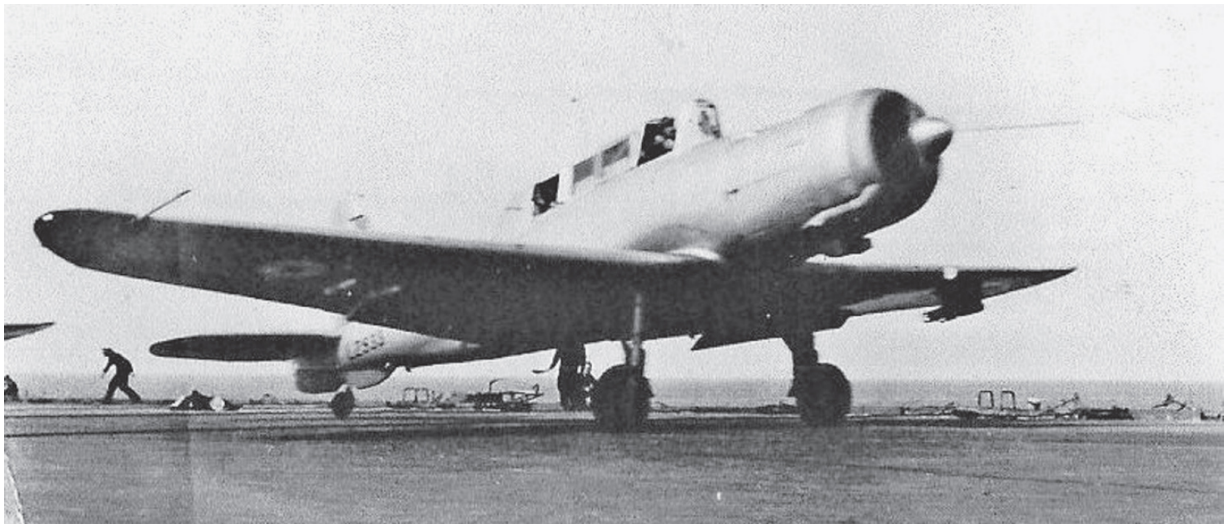
Some minutes later, *U30* surfaced again. Lemp had seen the dinghy in the periscope and risked coming up to cut the rope. With no bombs left, all Campbell could do was to open fire with his machine guns, forcing *U30* down once more as soon as the rope was off. Before heading back for *Ark Royal*, getting low on fuel, Hanson signalled with an Aldis lamp towards the lifeboats, telling them help was coming.

Back at *Fanad Head*, Oberbootsmaat Hanisch had already been rescued by his mates when Lieutenant Thurston was seen in the water. Maschinenobergefreiter Ohse jumped in to help him, in spite of being injured himself. PO Simpson was not found. No aircraft were above at the moment, and *U30* surfaced and approached the lee side of the freighter. The swell was too heavy to get alongside, but Lemp moved as close as he could and shouted across to his men still on board, asking what was going on. He was tired of the game and wanted to get away. The party wasn't quite over yet, though.

The third Skua, flown by Lieutenant Griffiths was also running low on fuel and had turned back for *Ark Royal* when the observer, PO McKay, sighted a ship in the distance. Unaware of earlier events, Griffiths came down to check its identity and was taken aback when seeing a U-boat behind the freighter. In a reaction similar to that of Thurston, he released his bombs as he passed over the submarine. The result was identical: the Skua went down, tearing off everything in front of the cockpit when it hit the water. PO McKay went down with the wreckage while Lieutenant Griffiths was thrown clear and started to swim towards *Fanad Head*. As he got close, a rope ladder was thrown down and, climbing it, he found to his surprise five Germans on deck tending his unconscious colleague Lieutenant Thurston.

Lemp surfaced once more and hailed to those on board *Fanad Head* that they should jump into the sea to be picked up. This they did, but while they were being recovered, the bow of *U30* slammed into the freighter with a mighty crash. Then the first of the Swordfish aircraft arrived. It had spent its bombs on something in the water near Rockall and could only fire its small guns at the submarine. The rescuees from *Fanad Head*, including the two British airmen, were unceremoniously dumped into the interior of *U30*, hatches slammed shut and the boat taken down for the last time. Thoroughly annoyed over the affair, Lemp fired a torpedo from the stern

tube while heading away and *Fanad Head* went down at around 18:00. The lifeboats drifted for another hour until Pinkerton and his crew, forty-two in all, were picked up by *Tartar* while *Bedouin* and *Punjabi* chased the U-boat.[10]



Blackburn Skua of 800 Squadron taking off from *Ark Royal*. (R Stevens collection)

Conditions on board the U-boat were not good. The forward torpedo tubes had been damaged by the collision and could not be used. In addition, there were leaks and three of the boarding party were injured, one, Maschinenobergefreiter Schmidt, seriously. *Bedouin* and *Punjabi* eventually found *U30* and started a chase with depth-charges. Lemp got away and, surfacing at 22:00, set course for Iceland. Shortly after, he received a signal from BdU, permitting him to contact the German consul at Reykjavik and have Schmidt transferred to the interned German steamer *Hamm*.[11]

Shortly before the transfer on 19 September, Lemp visited the severely wounded Schmidt in the petty officers' quarters. Everybody was ordered out, after which Lemp presented Schmidt with a handwritten declaration ordering him to sign it and take an oath never to talk about the events he had been involved in on 3 September. The groggy Schmidt signed the paper and vowed his silence. It was not until later, when he heard stories about the sinking of *Athenia*, that he realised what this was all about. Schmidt kept his oath until 1946 when an affidavit regarding his time on board *U30* was read at the Nuremberg Trials in the case against Raeder.[12]

U30 limped back to Wilhelmshaven, having to be towed the last bit home. The diving tank was damaged, there were several leaks and water had polluted the lubricating oil. Lieutenants Thurston and Griffiths were treated well on board, but when they were landed in Germany they were kept in isolation as political prisoners since, it was feared, Lemp and his men might have talked too freely about the sinking of *Athenia*.[13]

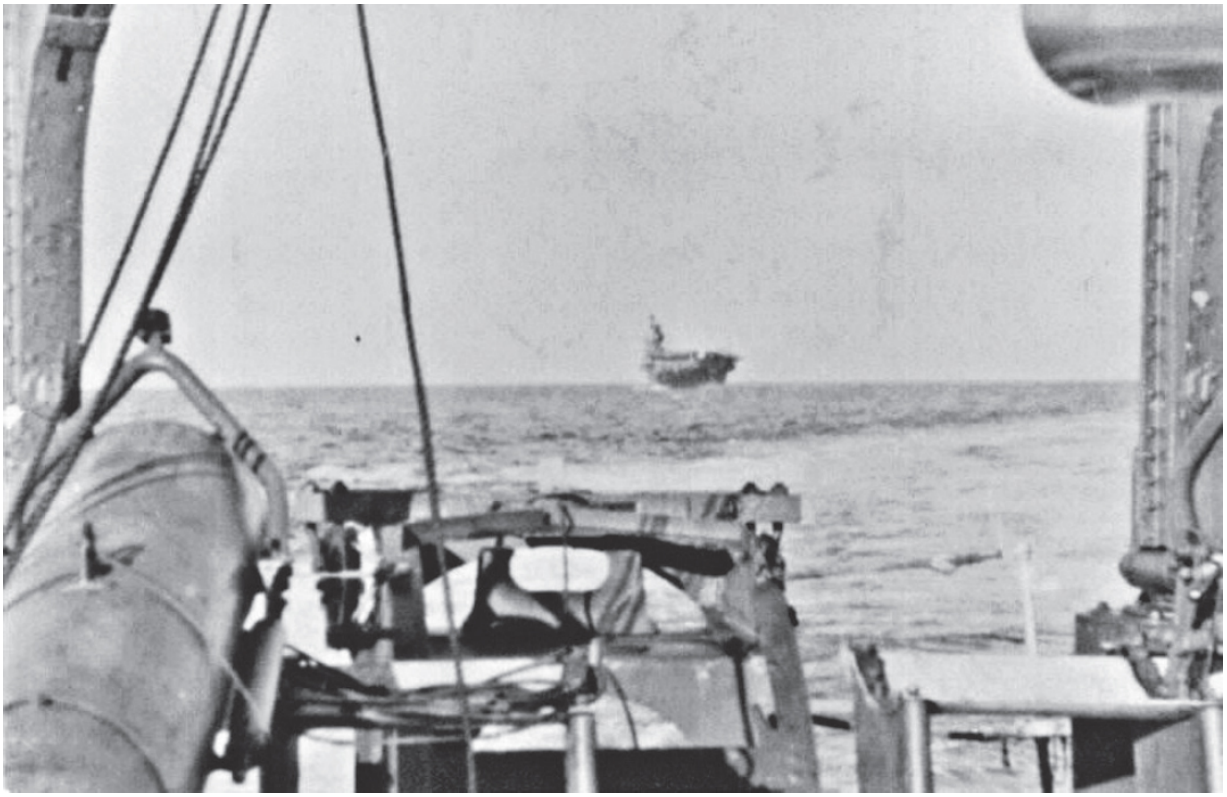
Ark Royal anchored at Loch Ewe in Scotland a few days later. As *U39* had been sunk, it appears that the extreme risk that the carrier had been exposed to was largely overlooked. Instead, it was suggested by the director of the Tactical Division, Captain Douglas Budgen, that the number of destroyers in each hunter-killer group be increased to eight or nine: 'Four for screening and for dealing with submarines within a few miles of the carrier, and four or five which should be concentrated for use with aircraft

to search independently, say 30–40 miles on some convenient bearing from the carrier.' The risks were recognised, but found worth taking, in spite of having to reduce A/S efforts elsewhere.[14] Within a few days, though, the whole tactical setting in the Western Approaches would change.

Close Screen

On 31 August, twenty-four Swordfish aircraft of FAA Squadrons 811 and 822 were embarked on board the carrier *Courageous* and, in the evening of 3 September, Captain William Makeig-Jones took her into the Western Approaches to hunt for German U-boats. Three destroyers were in company, *Ardent, Kempenfelt* and *Echo*. On board *Courageous*, which had been recommissioned some six weeks earlier, the atmosphere among the 1,260 sailors and airmen was relaxed and the ship's company remained at cruising stations during the day.[15] Officers dressed for dinner each evening and it was at times difficult to recognise that the ship was at war. Drills under war-like conditions seem to have been very limited. No U-boats were sighted or reported during the first patrol.[16]

Courageous's second patrol commenced during the morning of 16 September with *Inglefield, Ivanhoe, Impulsive* and *Intrepid* in company, operating north of a line 250º from Land's End. *Hermes* was also at sea, operating south of the 250º line with *Imogen, Ilex, Isis* and *Imperial*. Both groups were to stay west of 12º W as shore-based aircraft would cover the area inside this line. The objective of the patrols was given as 'the destruction of enemy submarines attacking merchant ships in the Western Approaches', but the two commanding officers had quite free rein as to how they chose to operate within their allocated areas, as long as any U-boat encountered was 'hunted until destroyed'.[17]



Courageous during her first war patrol in September 1939. The photo was taken from escorting destroyer *Ardent*. (M Sellick collection)

With only four destroyers supporting each carrier, their screens would be little more than nominal when aircraft reported contacts and two or even three destroyers would be sent to investigate. To the west of the carriers, the destroyers *Kempenfelt, Echo, Wakeful, Vesper, Venitia* and *Vanessa* were sweeping the outer lanes, as were *Kelly* and the two light cruisers *Ceres* and *Caradoc*.[18]

Courageous at sea on her last patrol. (Author's collection)

In the evening of 16 September, *Courageous*'s group made contact with a convoy, screening it into the Channel. During this time, the first presumed U-boat contact was made. Captain Arthur Talbot of *Inglefield* wrote:

> The four destroyers maintained a close screen on *Courageous* until 20:35, when *Impulsive* obtained a contact and dropped two depth-charges. *Inglefield* left the screen to assist and *Intrepid* and *Ivanhoe* were reformed in Screening Diagram No. 2. This contact was not confirmed by *Inglefield* but both ships continued to search until 21:50, when it was decided to abandon the contact as it was considered a non-sub. I did not consider it desirable to join up with *Courageous* during the night and therefore adjusted course and speed to remain 10 miles to the southward and rendezvoused with *Courageous* at 07:00 on the 17th September when the four destroyers again formed a close screen for her.[19]

During the morning, the force proceeded northwards, west of Ireland. Every two hours *Courageous* turned into the wind, flying off three or four Swordfish aircraft and taking down those of the previous patrol, having completed their sweeps about one hundred miles out. This usually meant the carrier had to increase speed to above 20 knots, forcing the destroyers to turn their Asdics off and retract the domes to keep up.[20]

In the afternoon of 17 September, a distress signal arrived from the 5,193-ton *Kafiristan*, running independently with 9,000 tons of sugar from Cuba to Liverpool. She was under attack by *U53* about 350 miles west of Cape Clear. Several shots had been fired by the U-boat, and Master John Busby set the engine telegraph to stop while he ordered the wireless operator to send an SOS signal including the current position. Some of the crew had panicked when the shooting started and the entire engine-room watch had left their positions and taken to one of the lifeboats. This meant that *Kafiristan* continued at 7 to 8 knots, going in circles, until one of the engineers managed to stop the engines by way of an emergency throttle on the boat deck. Meanwhile, *U53* held back, the crew undoubtedly amused by the behaviour of their prey. Once the freighter had finally stopped and the crew had taken to the boats, Kapitänleutnant Ernst-Günter Heinicke fired a torpedo, which hit aft. *Kafiristan* settled in the water, but did not sink.

About half an hour later, a second torpedo hit the starboard side and the freighter broke in half, each part going down fast.[21]

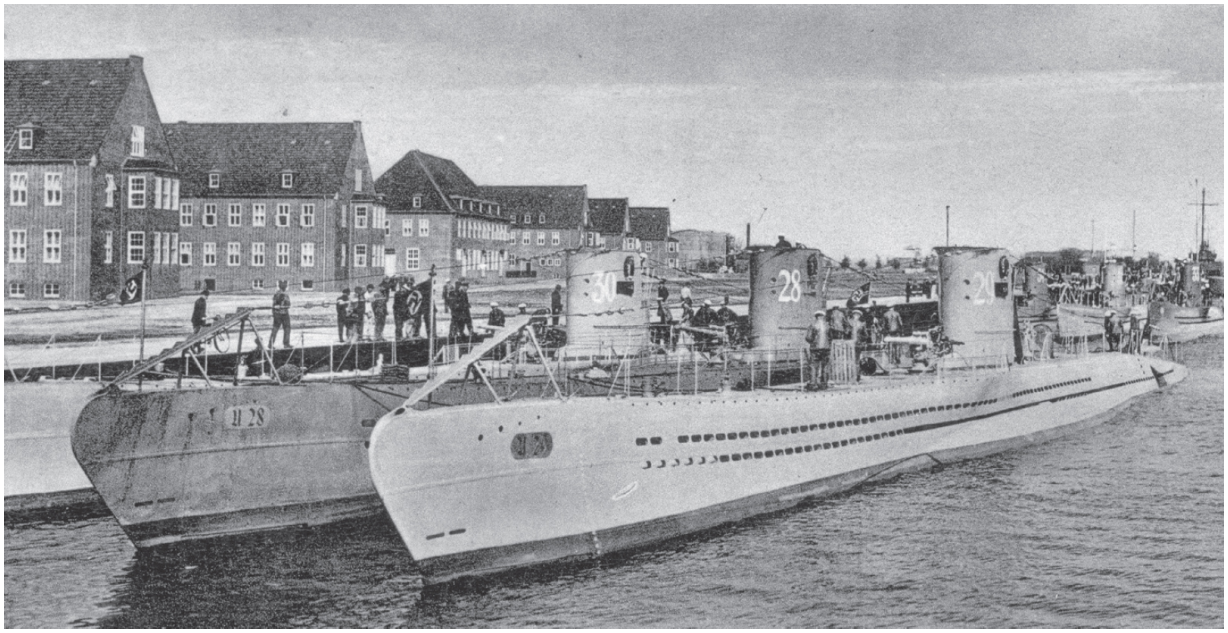
As soon as the distress signal from *Kafiristan* was received, a striking force of four Swordfish aircraft was launched from *Courageous* to search for the freighter and guide the A/S group in the right direction. The position of the steamer was uncertain as the transmission had been interrupted, and the aircraft were spread out to cover a large area. When they were off, and the three aircraft of the standing patrol had been taken on, Captain Makeig-Jones turned his carrier to westward at high speed to shorten the return flight of the striking force while *Inglefield* and *Intrepid* were dispatched in advance and headed off at maximum speed. *Ivanhoe* and *Impulsive* formed on *Courageous* in the so-called Screening Diagram No. 2, one on each bow 1,100 yards ahead. No further aircraft were flown off as close escort and zigzagging was terminated to make good as much ground as possible.[22]

Around 17:00, the aircraft on the right flank of the striking force sighted the sinking freighter and forced *U53* to dive by machine-gun fire without inflicting any damage. With *Kafiristan* sunk and the U-boat gone, the striking force headed back. To fly the incoming aircraft on, *Courageous* turned south-eastward at 19:22 and slowed down into the wind. The two first aircraft landed without mishap, but the two last, flying on the other side of the search, were not aware that the steamer had been found and continued their search as long as possible.[23] While waiting for the last two aircraft, Captain Makeig-Jones turned north to avoid heading away from them and in lieu of zigzagging. Eventually, the aircraft appeared and, to fly them on, *Courageous* steered 115º at 18 knots. The last of the two, flown by Lieutenant Charles Lamb with observer Lieutenant Robert Wall and rear gunner Doug Hemmingway, landed on *Courageous* with virtually empty tanks just before 19:45. Ten minutes later, as lieutenants Lamb and Wall stepped into the wardroom, eager for a drink, the carrier was rocked by two

explosions, seconds apart. Everything went dark and the massive vessel heeled to port.[24]

Three Torpedoes Fired

In mid-September Dönitz received intelligence of a convoy approaching Britain and ordered the boats on patrol in the Western Approaches, including *U53* and *U29*, to converge on its expected course. *U29* was running low on fuel and Kapitänleutnant Otto Schuhart knew if he did not find the convoy soon he would have to start the run for home. Around 16:05 on the 17th, a steamer was sighted to the west. Schuhart took his boat down, moving closer. It was difficult to determine the identity of the vessel and he had just decided to surface and intercept when a single-engine biplane was seen, circling the ship. Being 300 miles offshore, this could only mean that an aircraft carrier was in the vicinity. Half an hour later, parts of a superstructure emerged over the horizon. With great elation, Schuhart realised it was a carrier; at first believing it to be *Ark Royal*.

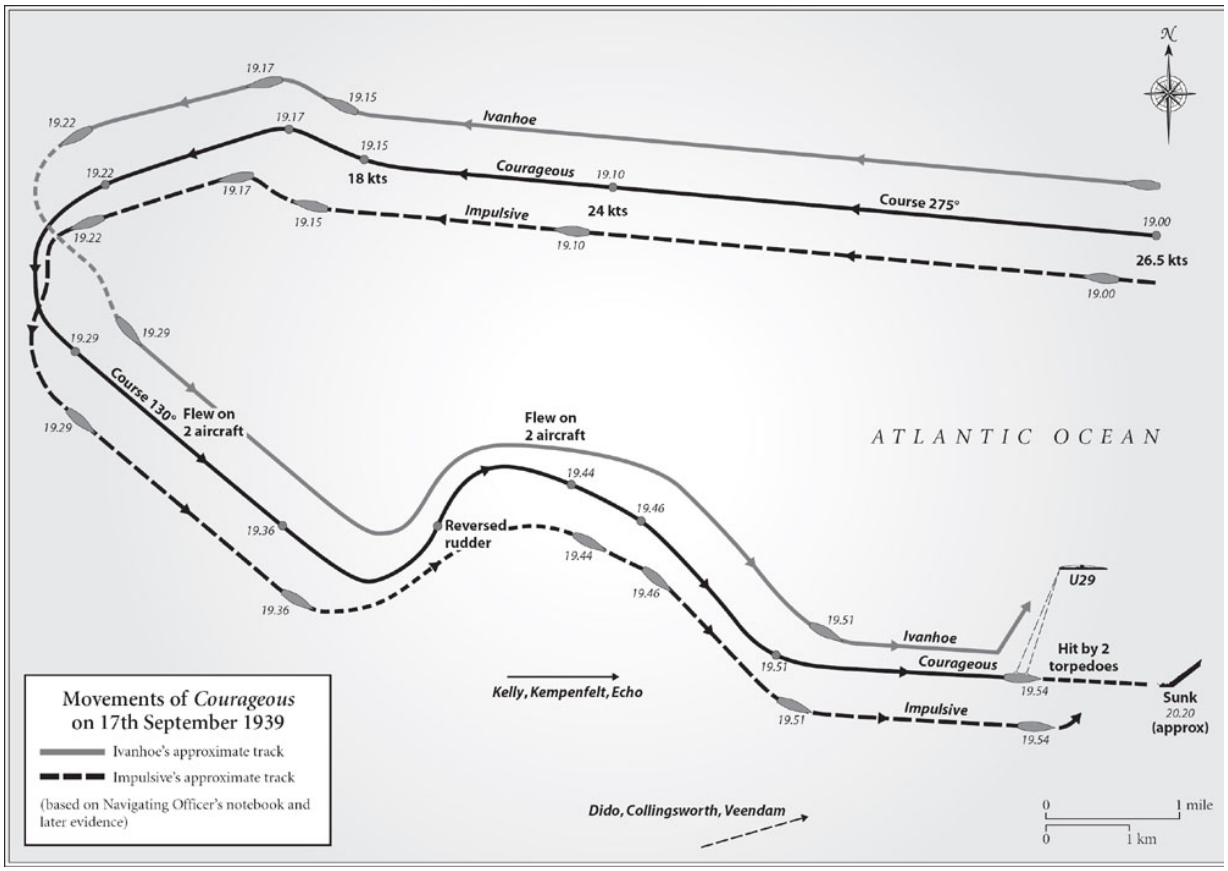


U28, U29, U30. (Author's collection)

To help him focus, Schuhart ordered all men out of the control room except those needed to keep the boat at the correct course and depth. Meanwhile, the three remaining G7e electrical torpedoes in the bow were prepared with contact pistols. From his experience of British zigzag patterns, Schuhart was confident the carrier would soon end up within firing range.[25] At around 19:22, the carrier, by now correctly identified as *Courageous*, altered course almost 180 degrees, heading into the wind to retrieve the returning Swordfish aircraft. Suddenly, the giant was in a perfect position for an attack and things started to happen fast. Schuhart was looking into the sun, which made observations difficult, but at 19:50 he decided *U29* was in the correct position:

> Three torpedoes fired while turning to starboard; 100º inclination. Aiming points 20 metres ahead of bow, amidships, and 20 metres astern. On firing, I see carrier's port destroyer 500 metres ahead of the boat. Turn hard starboard to 0º, full ahead on both engines. Dive quickly to 50 metres. The boat barely rose after the three torpedoes had been fired and is firmly under the control of [chief engineer Oberleutnant Lauf]. Two torpedo hits are clearly heard after 2 minutes 15 seconds, equal to some 2,160 metres. A major detonation immediately after the second followed by several smaller. The noises are so loud I am concerned that some damage might be done to the boat. Jubilation aboard, but shaded by concern as to what will happen to us now.[26]

Schuhart took *U29* deep to be prepared for the unavoidable counterattack; at first to 60 metres, then to 80 and finally to 100. Course was set to 80º, both engines as slow as possible while maintaining depth and course. Shortly after, the ominous ping of the Asdic against the side of the boat revealed they had been found and the sonar operator reported (falsely) that there were two destroyers on the surface. One attacked with a vengeance:



Adapted from NA-ADM 156/195

Loud propeller noises close the boat rapidly and pass overhead. Four depth-charges are dropped and detonate right over the boat but well above us. The boat shudders. I am standing in the tower and feel everything shake. A few minutes later, six more charges give us a similar shaking, but in the third attack the charges detonate somewhat further away.[27]

After these three attacks, *U29* was lost to the British Asdic operators. Between fifty and sixty depth-charges were dropped, but far away from the boat. From 22:00, by which time Schuhart had managed to put some 4 miles between himself and the point from where the torpedoes had been fired, only sporadic detonations could be heard. By midnight the pursuers had been definitely shaken off and *U29* surfaced. Tension had been high in the boat and most men, including the officers, were exhausted from the intense efforts they had made. With only two torpedoes left and no more fuel than needed for the return, Schuhart set course for home at 10 knots.

By the next morning, news of the sinking was broadcast worldwide and, at midday, the crew of *U29* could hear on British radio that they had indeed sunk *Courageous*. They were also, to their great excitement, informed that they had been sunk themselves.[28]

Abandon Ship

When the two torpedoes tore into *Courageous*'s port side, she was on a south-easterly course. *Ivanhoe* was on her port bow and *Impulsive* on her starboard. Neither had any notion of the presence of the U-boat and no torpedo tracks were observed. Immediately the 'Action Stations' had been sounded, Commander Basil Jones of *Ivanhoe* ordered 'Hard a-port' heading towards the probable position the torpedoes had been fired from. The narration of what happened subsequently, as perceived on board the destroyer, is curiously different from Schuhart's account:

> At 19:58½, a contact was obtained on the starboard bow. Asdic conditions were good. The echo was classified as 'submarine' moving slowly left, inclination 'moderate closing'. A pattern of depth-charges were dropped at 20:00. Black oil and bubbles were observed rising after this attack. No contact was obtained in the neighbourhood of this oil source subsequently. While turning to port round the oil patch, two torpedo tracks were seen apparently aimed at *Ivanhoe* […]. These were avoided. A second contact, again classified as 'submarine' was obtained at 20:13. A pattern of depth-charges was dropped at 20:16½. Witnesses state that when approaching the firing position, a series of oil patches was seen twenty to thirty yards on the port beam and that the second pattern was dropped where these patches terminated. Two witnesses state that they saw a submarine break surface after the second attack inclined at a steep angle 'bows-up' and then roll over to starboard until the conning tower was horizontal. Further, one states the conning tower was marked with a 'U' or the figures '11'. This witness was using a pair of binoculars.[29]

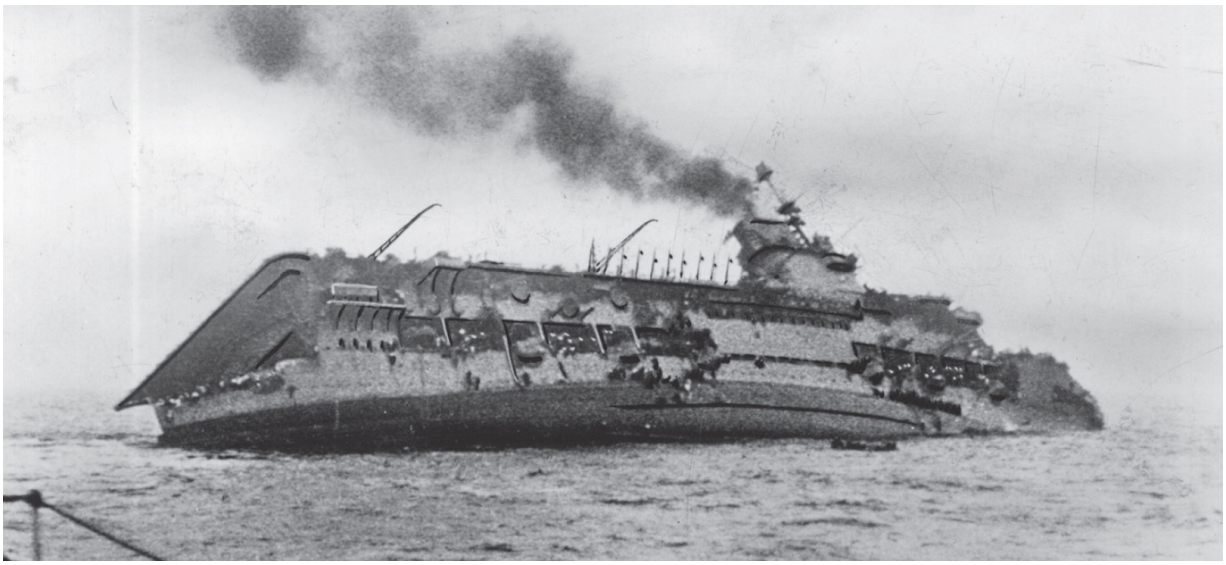
The events must have been extremely confusing as the last part of this is rather far from what actually happened. Commander Jones reports two patterns of depth-charges whereas the log of *Ivanhoe* has three, as would be similar to what was recorded on board *U29*. The two first depth-charge attacks certainly shook the U-boat and there was some damage and leakage.

U29 was deep, though, and Schuhart managed to get away northwards. Some oil leakage to the surface from the first two attacks is not unlikely. The rest of Jones's account is more difficult to explain. There is no record of Schuhart even considering firing torpedoes at the destroyer, or that his U-boat broke surface, far less at a steeply inclined angle, rolling over. Between firing the torpedoes and being attacked, almost ten minutes passed, and there is no reason to doubt that by the time *Ivanhoe* arrived overhead, *U29* was deep. What the men on board *Ivanhoe* actually saw remains speculation. The third depth-charge attack was a complete miss and probably on a non-sub echo. Mistakenly satisfied that the culprit had been eliminated, Commander Jones first approached the nearby Dutch passenger liner *Veendam*, requesting her assistance in the rescue work, before he headed for where *Impulsive* could be seen. The carrier was nowhere to be sighted.[30]

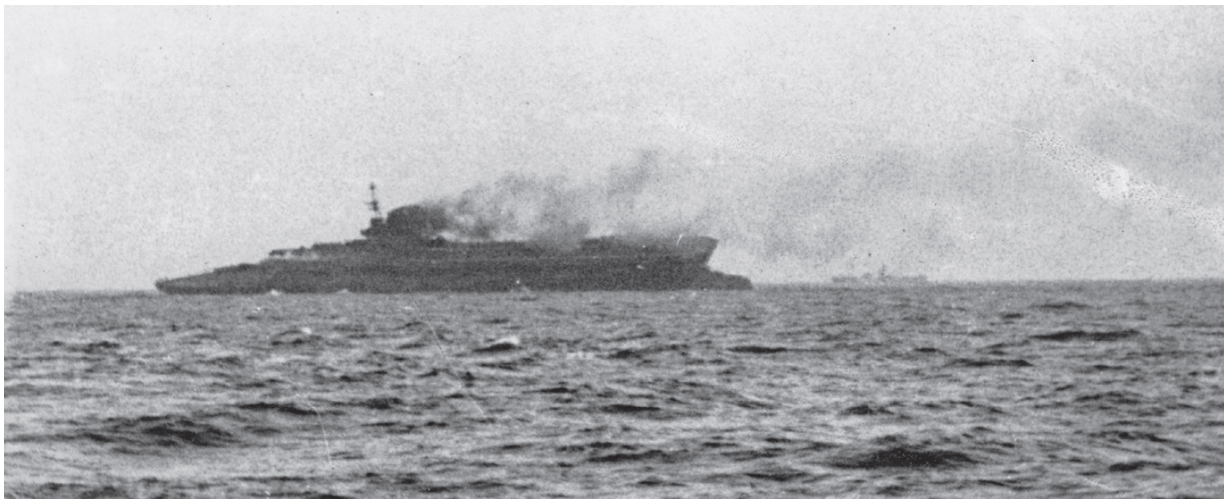
On board *Courageous*, not one of the lookouts or officers on the bridge saw any torpedo tracks or perceived any danger until, at about 19:55, two heavy explosions ripped the carrier open just abaft the bridge. The first torpedo hit abreast the petty officers' flat, the second at the after end of the B boiler room. Water poured in and she immediately took on a significant list to port, the side of the flight deck only a few feet above sea level. Inside the hangar, the recently recovered aircraft, not yet secured, slid towards the port bulkhead, crashing into each other, creating chaos and adding to the instability of the ship. Everything loose tumbled down the sloping decks and hundreds of men were thrown into the sea, totally unprepared and in most cases with no life-saving equipment. Few of these were retrieved alive. The ring main, which was not split into sections, was severed, cutting all power, silencing communications equipment and shutting down just about every piece of machinery on board.[31] Due to the approaching nightfall, the ship was about to be darkened and most deadlights and screen doors had been closed, making the interior of the carrier a dark labyrinth

when the lights went out. Outside, a piece of the mast aerial fell across the lanyard operating the steam siren on the funnel, starting an agonising howl as if the ship itself realised she had been mortally hit. The sound deafened the crew to the extent that verbal orders were difficult to hear and many men became confused and demoralised.[32]

The Board of Inquiry later concluded that the initial flooding due to the explosion of the torpedoes should not have caused the carrier to sink. The flooding spread forward and aft with alarming speed through hatches and doors left open. According to regulations all 'X' doors (that is, those considered critical for sealing off compartments of the ship) should have been closed, but approval had been given by the officer of the day for an unspecified number of them to be opened. A 'watertight door book' was kept, but there were no regulations limiting the number of doors that could be opened at any one time and there appeared to be limited follow-up on closing the doors as soon as the reason for opening them was over. All doors not defined as 'X' doors were generally left open, as were most ventilators. Hence, there was almost a free run of water throughout *Courageous* as the list increased. Orders to close the watertight doors given after the torpedoes hit never reached the stations due to the loss of communication, and routines for closing them on local initiatives appear not to have been established – or at least not practised.[33]



Courageous sinking. Daily Express



Courageous sinking. D Briggs collection

Within minutes of the explosions, the quartermaster reported to the bridge that the ship would not steer and that he could not get through to the engine room by telephone. There was no response to the engine telegraphs either. Some ten minutes after being hit, bulkheads were heard to collapse below and the list increased markedly. Captain Makeig-Jones, last seen having climbed over the side of the slanting bridge to the so-called admiral's walk, ordered the signal books and codes to be collected and placed on the compass platform while the emergency signal 'Stand by Me' was hoisted in what remained of the mast. Resigned, he then added that anyone who wished to leave the ship was at liberty to do so. There seems to have been limited initiative among the great majority of the ship's company to try to save the ship in the absence of orders from the captain or the executive officer.[34]

Some men acted decisively. In the forward centre engine room, Lieutenant John Phillip Shenton ordered the engines to be stopped and the engine room to be evacuated immediately after the explosions. A few men coming up from the boiler room, some with grisly wounds, were helped out, and in the dim glow of his torch Shenton closed the emergency bulkheads and shut down the steam supply to the engines before he left up the ladder, as the last man out. Throughout the events, he received no orders from the bridge. In other places below decks, men stumbled through dark, angled corridors, trying to find their way out. Counter-flooding attempts to decrease the list failed, as the gearing of the valve had been jammed by the explosion.

All boats except the sea boats were secured in their stowages and due to the heavy list those on the starboard side could not be lowered, except for the cutter, which turned out to be damaged and of little use. Many of the boats on the port side were torn loose from their stowages and crushed by the onrushing waters, although a few were eventually launched. A few

Carley floats were also lowered, but most men were left to swim as best they could, helped by their lifebelts or whatever flotsam they could find.

Having helped the medical officer, Surgeon Commander Clifford-Brown, out of the anteroom, Lieutenant Lamb managed to retrieve his lifevest from his cabin before struggling through the dark corridors out onto the deck where:

> the Commander's face appeared above the quarter-deck, looking down from the seaplane platform, which protruded over the quarter-deck below, and shouted 'abandon ship' several times. His face was grey with anxiety. Men were diving into the water in all directions, some from the flight-deck which was fully seventy feet above sea level. The bilges, normally concealed below the water-line, were horribly exposed and were quite ten feet farther to starboard than the edge of the flight-deck. As I looked, a man misjudged it and failed to reach the sea.[35]

Lamb was a good swimmer and, eventually going into the sea himself, helped several men across to *Impulsive*, which had remained by the carrier and lowered boats when it was seen that there were men already in the water. About twenty minutes after being hit, between 20:16 and 20:21 according to various reports, *Courageous* rose her quarterdeck high in the air before slipping under; 518 lives were lost, including that of Captain Makeig-Jones.

Impulsive was quickly joined in her rescue efforts by the British merchant *Dido*, the American steamer *Collingsworth* and eventually the *Veendam*. The latter launched a number of lifeboats, but rescued only one man, who later perished.

Immediately receiving the news of the torpedoing, *Inglefield* and *Intrepid* turned back and arrived at the site of the sinking at 23:35. Shortly after, *Impulsive* set course for Devonport, where she arrived the following evening with the first survivors. Further help arrived when *Kelly, Kempenfelt* and *Echo* joined, the latter two screening the others from further attacks. The cruisers *Caradoc* and *Ceres* had arrived with *Kelly* but could

contribute little to the rescue work and were ordered to head for Plymouth. Chief Yeoman of Signals on board *Inglefield*, Richard Carson, wrote:

> All night we steamed in the vicinity attacking with depth-charges anything remotely resembling a contact. You can imagine how the nerves of [the 220 survivors we had on board] were stretched taut at every explosion with the sudden leap and violent shake a destroyer sustains when the charges explode. Each explosion reminded them of the moment when their great ship had been hit. One old chief cook was not being in the least profane when he said to me 'I hadn't said a prayer for twenty years, but I bloody well made up for it while I was doing the breast stroke towards that Carley float.'[36]

Impulsive brought 44 officers and 320 ratings to Devonport, plus the bodies of three men who did not survive the night. *Dido* picked up 23 officers and over 190 ratings, who were transferred to *Inglefield*, including Commander Abel-Smith, senior among the rescuees.[37] An additional thirty-eight rescuees were transferred from *Collingsworth* to *Kelly*. After searching thoroughly across the site of the sinking at dawn, ascertaining no more survivors were in the water, *Inglefield, Ivanhoe* and *Kelly* set course for Plymouth at 28 knots. *Kempenfelt* and *Echo* had no survivors on board and continued the search for U-boats in the area.[38]

The Royal Navy had learned the hard way that watertight doors had to be shut and kept closed at all times when at sea in wartime. It was also clear that emergency drills had to be prioritised, as would training men to act independently if communication broke down during a disaster.[39]

The unsuccessful attack on *Ark Royal* by *U39* on 14 September and the sinking of *Courageous* three days later prompted the Admiralty on the 18th to withdraw its carriers from A/S patrols. It was assessed that, in order to be reasonably efficient, at an acceptable risk, eight to nine destroyers would be required per carrier, of which a minimum of four should remain as close escort at all times. The others should only hunt contacts reported within 30 miles, the maximum distance they could cover while a U-boat sighted by the aircraft and forced to dive would still be in the vicinity of where it had been reported. Beyond this, the aircraft of the carrier could still operate, but

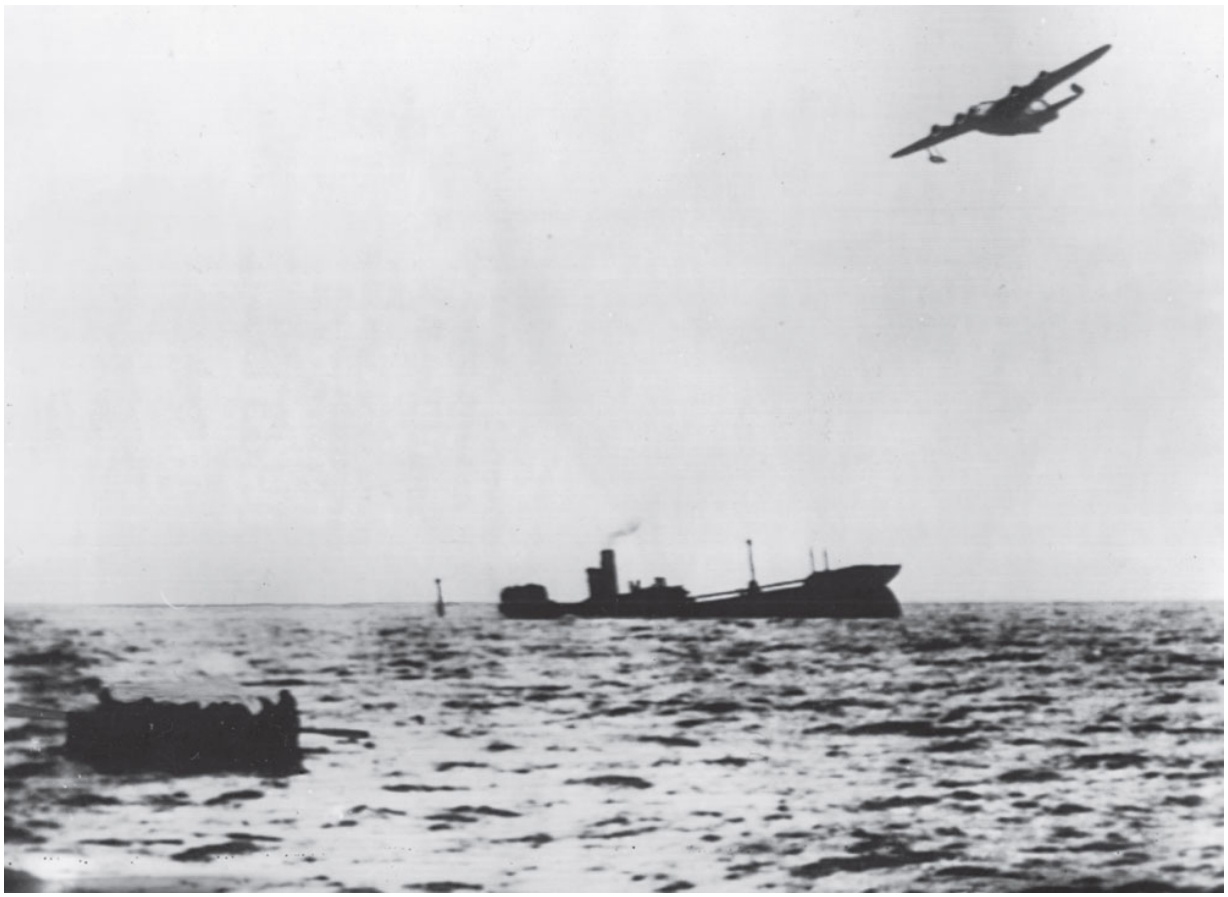
only to scout and harass U-boats by forcing them to dive. The number of suitable destroyers for sustainable operations of this kind was not readily available, though. Later in the war, carriers would do sterling service in the A/S role but for now, their part would be to engage in the hunt for German surface raiders.[40]

On 18 September the 4,863-ton British freighter *Kensington Court* was stopped and attacked by gunfire from *U32* between Fastnet and Bishops Rock. *Inglefield* and *Ivanhoe* were steering for Plymouth with survivors from *Courageous* when the signal from *Kensington Court* was received at 14:07. Captain Talbot of *Inglefield* acted promptly:

> Speed was increased to 30 knots and course altered to close the position, which was reached at 18:00. *Kelly* and cruiser *Caradoc* were already in the vicinity. As *Caradoc* could not assist from the A/S point of view and was bound to be a constant anxiety, I ordered her to return to Plymouth. I formed *Inglefield, Kelly* and *Ivanhoe* for a search and *Kempenfelt* and *Echo* joined in shortly afterward. At 18:45, *Ivanhoe* found wreckage and two boats and a raft from *Kensington Court*, but there were no survivors in them.[41]

Unknown to Talbot, Master Joseph Schofield and the thirty-three crewmembers from *Kensington Court* had taken to the boats and been rescued by two Sunderland flying boats – one from 228 and one from 204 Squadron.[42]

Kempenfelt and *Echo* were short of fuel and continued for home at 20:30. Shortly after, *Kelly* reported a direction finding (D/F) bearing of a strong German radio signal, believed to be from a U-boat. *Inglefield, Ivanhoe* and *Kelly* set course for the source, and Asdic contact was obtained. The three destroyers carried out several attacks during the night but daylight revealed wreckage of unquestionably British origin and in all likelihood it was the wreck of *Kensington Court* that had been the target for the night. The hunt was abandoned and course shaped for Plymouth to deliver the survivors from *Courageous*.[43]



The first air rescue of survivors from a sinking ship, 18 September 1939. One of the Sunderlands involved in the rescue of the thirty-four crewmembers from *Kensington Court* is circling above the sinking merchantman. (Author's collection)

— 12 —
The Grey Wolves

Target with Dimmed Lights

U48 WAS A TYPICAL representative of the Atlantic boats in service at the outbreak of the war. Built as a Type VIIB boat at the Germania-Werft in Kiel in early 1939, it was to become the most successful U-boat of the war. Through twelve patrols with three Kommandants during two years of active service, she would sink fifty-one merchant ships for a total of some 307,000 tons, plus the sloop *Dundee*. In September 1939 Kapitänleutnant Herbert Schultze was her captain, taking her on four remarkable patrols during the first six months of the war.

Table 12.1: U48's patrols 19 August 1939–26 February 1940

	Depart	*Return*	*Ships sunk*
First patrol	19 Aug. 1939	17 Sept.	*Royal Sceptre*, British, 4,853 tons *Winkleigh*, British, 5,055 tons *Firby*, British, 4,869 tons Total 14,777 tons
Second patrol	4 Oct.	25 Oct.	*Emile Miguet*, French, 14,115 tons *Heronspool*, British, 5,202 tons *Louisiane*, French, 6,903 tons *Sneaton*, British, 3,677 tons *Clan Chisholm*, British, 7,256 tons Total 37,153 tons
Third patrol	20 Nov.	20 Dec.	*Gustaf E Reuter*, Swedish, 6,336 tons *Brandon*, British, 6,668 tons *San Alberto*, British, 7,397 tons *Germaine*, Greek, 5,217 tons Total 25,618 tons
Fourth patrol	24 Jan. 1940	26 Feb.	*Burgerdijk*, Dutch, 6,853 tons *Sultan Star*, British, 12,306 tons *Den Haag*, Dutch, 8,971 tons *Wilja*, Finnish, 3,396 tons

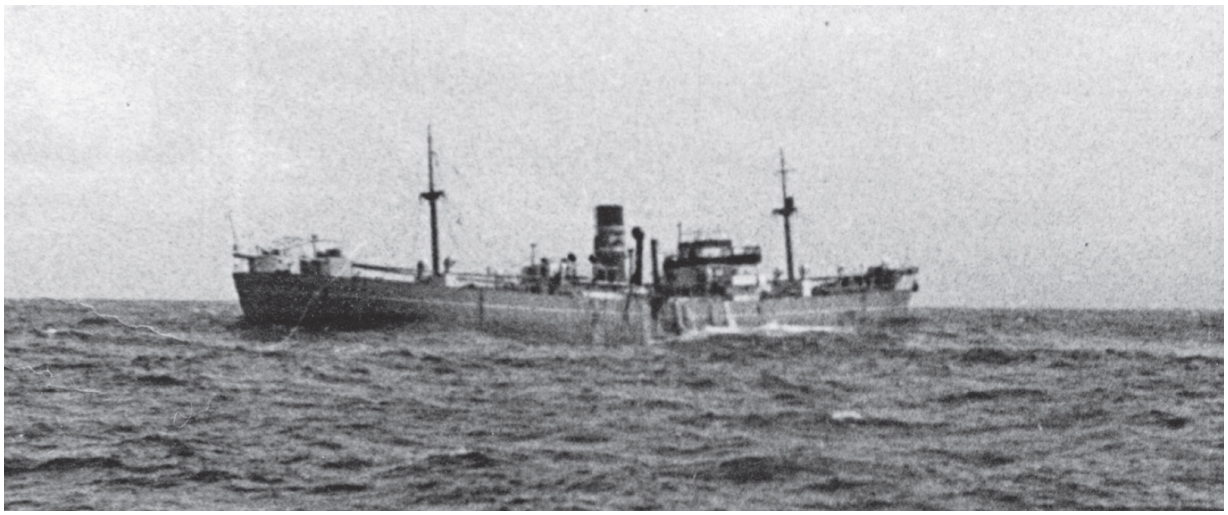
Kapitänleutnant Herbert Schultze. (Author’s collection)

Schultze had taken command of *U48* when she was commissioned in April 1939 and he and his men had adapted to each other – so much so that he had earned the affectionate nickname 'Vaddi' from his crew, who believed they had the best captain in the navy, trusting him to get them out of all dangerous situations, with some panache.[1]

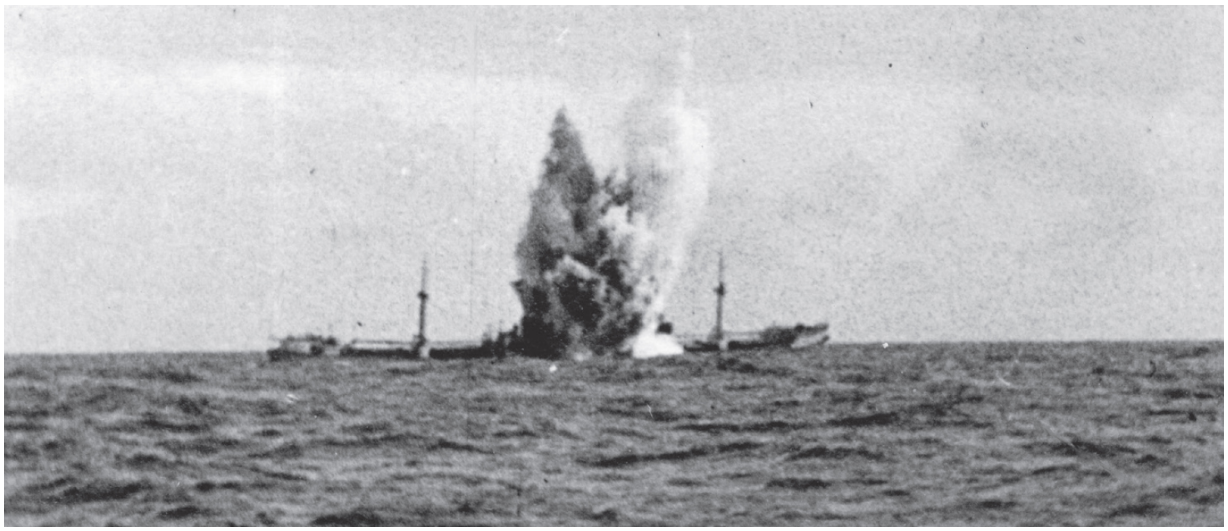
U48 was among the first boats to leave Kiel, on 19 August. Travelling north of the British Isles, Schultze took her into the North Atlantic, before he proceeded to patrol off the Western Approaches. Two weeks into the patrol, on Sunday 3 September, the *Beginn*-signal arrived from Berlin. Two days later, on 5 September, the first legal target was sighted.[2] This was the 4,853-ton British freighter *Royal Sceptre* travelling unescorted from Buenos Aires to Belfast with wheat and maize. Seeing the U-boat surfacing close ahead at 11:00, Chief Officer Norman Hartley on watch:

> put the stern of the ship to the submarine, and tried to evade capture. About a minute after the submarine broke surface he started to open fire at us. The first two shells fell well ahead of the ship. He then dropped his range, firing shells about every 20 seconds. One shot blew away the wireless aerial. The Captain [Master James Gair] had been called and was up on the bridge with me. The next shot burst in the Captain's bathroom adjacent to the wireless room. The Captain then said 'Abandon ship and stop the engines.'3[3]

Schultze generally considered the use of the deck gun dangerous, but, as the radio operator told him that the freighter was sending SSS signals, he ordered his three-man gun crew into action while organising a chain of men to bring the rounds up from below. Master Gair was killed by splinters from a shell exploding in the superstructure while the boats were lowered. Nine men were wounded. Schultze ascertained that the men in the two boats had food and provisions and had pulled sufficiently far away before sending, at 13:38, a torpedo into the side of *Royal Sceptre*, which started to sink.



U48, first patrol, 5 September 1939. The 4,853-ton *Royal Sceptre* has been intercepted.



At 13:38, after the crew had taken to the boats, a single torpedo from *U48* sealed her fate. (Author's collection)

Meanwhile, a second British merchantman, *Browning*, had been sighted from *U48* and signalled to stop. She was as good a target as the *Royal Sceptre* had been, but Schultze believed sufficient work had been done for one day. Seeing with some hilarity that the British crew took to their boats without even being fired at, he approached the lifeboats, ordering them back on board their ship and, after warning them not to use their radio, advised where they could find the boats from the *Sceptre*. Trusting that all survivors would be taken care of, Schultze set course northwards after making a wide detour towards the south-east, until he was out of sight of *Browning*. The latter was en route to Brazil, and sent no signal that she had picked up the survivors from *Royal Sceptre*. Churchill, assuming that the sixty-man crew and passengers of *Sceptre* had perished, saw a propaganda opportunity and declared the sinking to have been without warning and an 'odious act of bestial piracy on the high seas'. This caused some quickly forgotten embarrassment when, two weeks later, *Browning* and the survivors turned up in Bahia and could recount to Reuters how they had been saved.[4]

In the days that followed, several ships were stopped and searched by *U48*, most being neutrals with their papers in order. On 8 September, though, the 5,055-ton *Winkleigh* was sunk. From her lifeboat, Master Thomas Georgeson was told to come on board the U-boat and was greeted cordially on deck by Schultze, who:

> said he was sorry he would have to sink my ship. I told him I was a long way off the land, about 380 miles, and suggested that he towed my boats towards land. He said he could not do so. He asked me if I had provisions in the boat and so I told him I had, but he insisted and gave me four loaves of bread. Then he brought a bottle of schnapps up and taking out a packet of cigarettes, offered me one and put the remainder of the packet in my hand. The schnapps was of German origin, but the cigarettes were American. […] The Commander was a man of 5'8½ or 5'9. He was dark and unshaven for several days. He was about 26 years of age [actually he was 31]. He speaks fairly good English with a noticeable but not bad accent. He was dressed in an old blue uniform which was stained with oil. […] He was bareheaded and his hair was dark.[5]

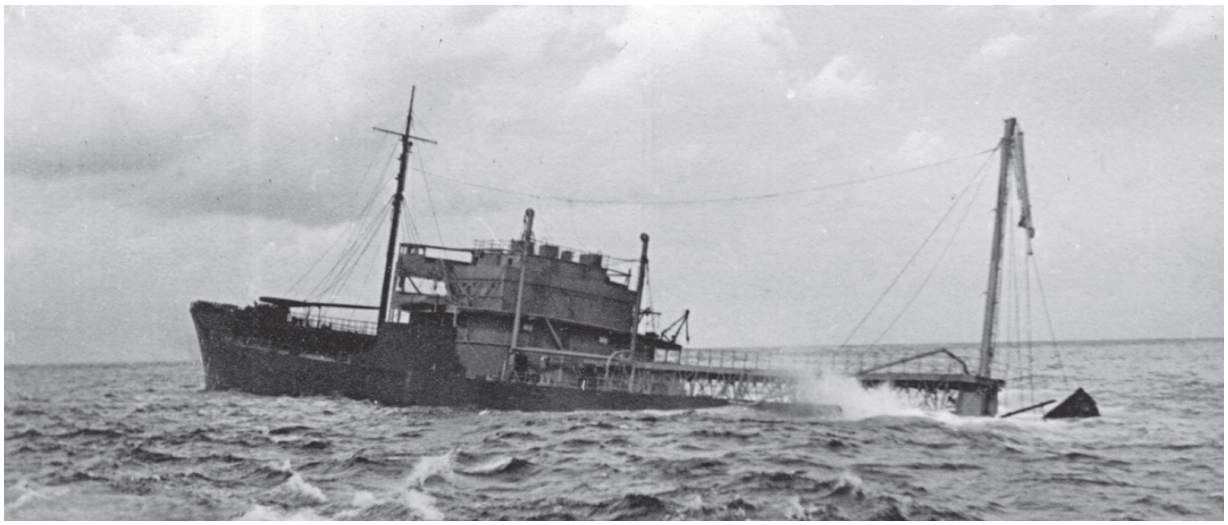
On the 11th, the 4,869-ton *Firby* was intercepted and sunk after the crew had taken to the boats. Medical attention was needed for some of the men from the British freighter but Schultze could not provide this, other than a supply of bandages. Instead, he defiantly sent an open radio signal in English, complete with German spelling: 'Transmit to Mr. Churchill. Have sunk the British steamer *Firby* in position 59º 40' N and 13º 50' W. Please safe the crew.' The radio signal was widely commented upon, including in the House of Commons, and Churchill informed the House (falsely) that the U-boat captain who sent the message had been captured. In the early hours of 17 September, after thirty days at sea, *U48* returned to Kiel, having sunk three vessels for a total of 14,777 tons.[6]

After two weeks of maintenance for the boat and rest for the crew, *U48* left for her second patrol on 4 October. This time, Schultze again took his boat north of Shetland to avoid the Fair Isle Channel, where he expected A/S patrols and aircraft, arriving at the designated patrol area near Porcupine Bank on day nine, 12 October. As on the first patrol, the first officer (IWO) was Oberleutnant Reinhard 'Teddy' Suhren, second officer (IIWO) was Oberleutnant Otto Ites, while the leading engineer (LI) was Oberleutnant Erich Zürn and senior warrant officer was Obersteuermann Willy Kronenbitter.[7] This team was already among the most experienced of the U-bootwaffe and within two weeks they would sink a further five Allied ships in spite of at least seven of the fourteen torpedoes fired being *Versagers*.[8]

The first victim was the 14,115-ton French tanker *Emile Miguet* on 12 October. She was inbound from Jamaica to Le Havre with 137,000 barrels of crude oil and gasoline and had left convoy KJ-2 some days earlier to travel alone towards France.[9] At around 18:00 *Emile Miguet* was intercepted by *U48* and stopped by gunfire some 190 miles south-west of Fastnet. Twenty minutes later, after the crew had taken to the boats, Schultze ordered a torpedo fired. It exploded amidships and the tanker caught fire and settled in the water, but did not sink. One crewmember was

killed during the incident and one went missing. The survivors were picked up by the American freighter *Black Hawk*.

While they were observing the effects of the torpedo fired on *Emile Miguet*, a second, darkened ship hove into sight. Schultze decided the tanker was going nowhere but down and, eager for another scalp, started to position his U-boat for an attack on the new target. This was the 5,202-ton freighter *Heronspool*, a straggler from convoy OB-17 for Montreal. *U48*'s war diary reads:



U48, second patrol, 12 October 1939. French tanker *Emile Miguet* settling in the water, her stern broken off by a torpedo hit. The bow section drifted for days. (Author's collection)

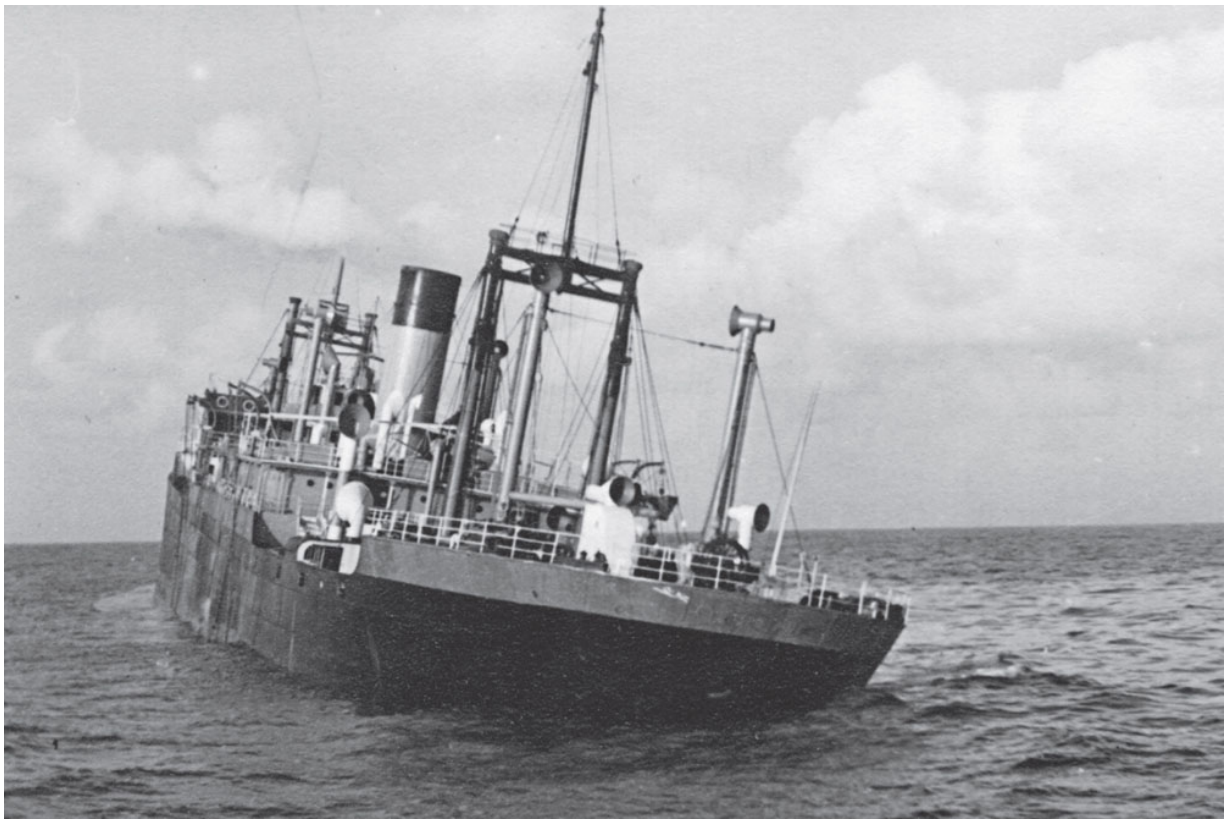
20:24. First torpedo fired on steamer with dimmed lights. It detonated about 100 metres from our bow. Through this, the freighter became aware of us and responded by sending SOS and its name. It is the British *Heronspool*, 5,202 tons. We pursue. The steamer is shooting at us with artillery (two shots). 5 minutes later another two shots. She is sending SOS signals that she is pursued by submarine.

Second torpedo [at 21:15]. No detonation heard. We continue the pursuit. Third torpedo [at 23:05]. No detonation heard. Fourth torpedo. No detonation. Turned boat and shot fifth torpedo from the rear tube [at 23.52]. This detonated 120 metres behind us. Sixth torpedo [at 01:16 on the 13th]. Hit in the foreship. Steamer starts to sink slowly by the bow. Crew takes to the boats.[10]

Master Sidney Batson of the *Heronspool* had a slightly different view of the events. The U-boat had been sighted at 18:00 when it was pursuing *Emile Miguet* and Batson had changed course to the north-east to escape, while the wireless operator sent SSS signals. Schultze gave chase as darkness settled.

The submarine appeared on the port quarter about 8:30 p.m. The first intimation of her was her signalling to us. [Shortly after] the submarine actually came into view and we fired two shots at her. […] The submarine appeared to decrease speed and submerge. We steered away to the west for about two hours, zig-zagging of course, and round about 11 p.m. we spotted the submarine again nearly aft. We again fired two shots. He then disappeared from our view until round about midnight when we heard a loud explosion close on the starboard beam and a big column of water about 100 feet shot into the air. After the explosion we fired four shots between about midnight and 12:40. […] He must have finally overhauled us on the port side as about 1 a.m., we felt an explosion in the fore part of the ship, indicating that we had been torpedoed. It took us somewhat by surprise as I was actually looking aft. I ordered the crew to abandon ship.[11]

Master Sidney Batson and his crew from *Heronspool* were rescued by the American passenger ship *President Harding* and landed in New York. (Author's collection)



U48, second patrol. *Louisiane* going down after having been damaged by gunfire. (Author's collection)

Next to go was the French 6,903-ton freighter *Louisiane* (Master Charles Bandon), a straggler from convoy OA-17 for Havana. She was intercepted later in the morning, stopped with a few shots into the superstructure and sunk by gunfire after the crew had abandoned ship. The *Louisiane* went down at around 09:00. At this time, a destroyer was sighted on the horizon and when it opened fire shortly after, Schultze took his boat deep.

There were actually two destroyers, *Imogen* and *Ilex*. Captain Bandon and his thirty-six men were taken on board the destroyers, after which a search for the U-boat was initiated. No firm contacts were obtained, though, and after a few hours, the destroyers set course for *Stonepool*, another freighter reporting that she was under attack.[12]

On board *U48* a few depth-charges were heard and some Asdic pinging, but not close, and by early afternoon the U-boat was back on the surface, looking for fresh prey. The next ship intercepted, the Norwegian *Europe* with petrol for neutral Holland, was allowed to proceed. At dusk, the sea was so calm that Schultze decided to take the opportunity to bring the two torpedoes from the outside containers into the boat. This was completed in less than an hour, but during this time *U48* was extremely vulnerable.[13]

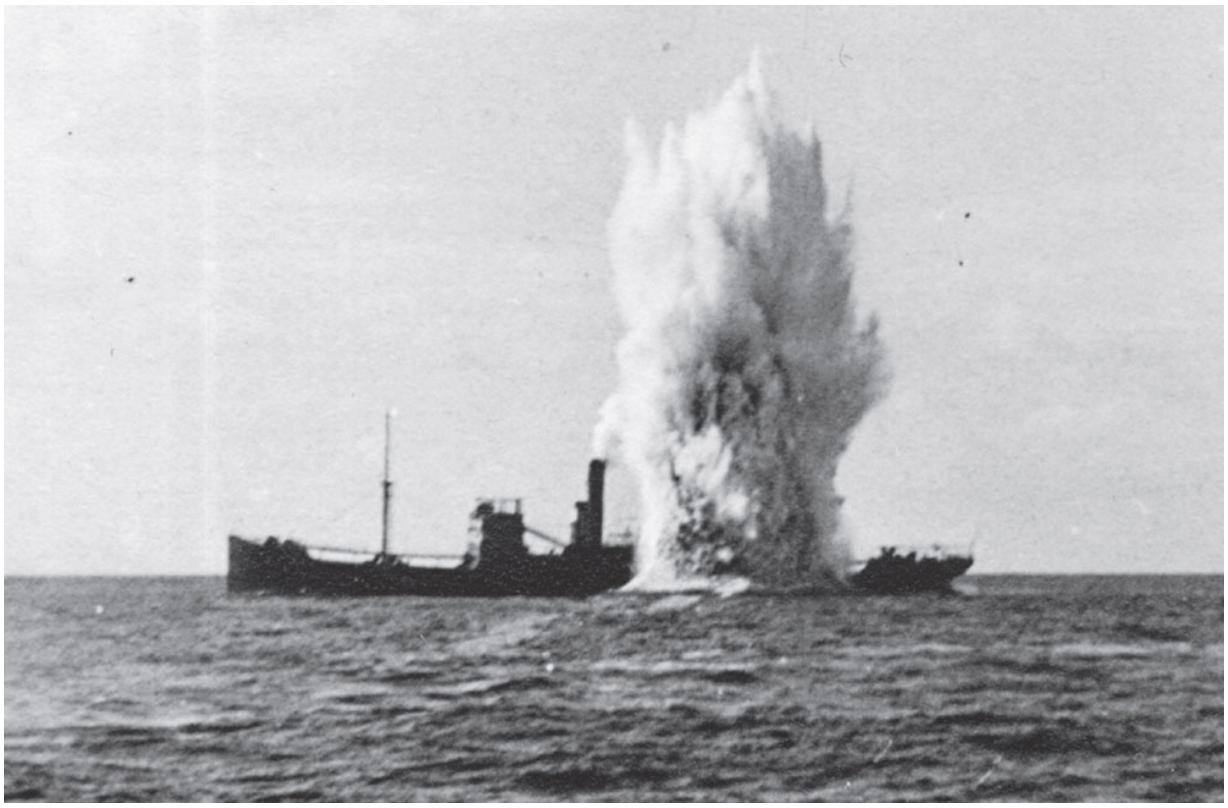
On 14 October, the 3,677-ton *Sneaton* (Master Thomas Grainger), travelling from Cardiff to Rio de Janeiro with coal, ventured into the sights of *U48*. At 12:13 she was stopped by gunfire about 150 miles south-west of Cape Clear and sunk by a torpedo twenty minutes later, after the crew had abandoned ship. One man was killed by the gunfire before *Sneaton* was stopped. The survivors were picked up by the Belgian tanker *Alexandria André* and landed at Weymouth. On the 15th, nothing was sighted except the still-floating bow section of *Emile Miguet*, which was shelled until it started burning, but still it did not sink. On the 16th, the 8,800-ton Dutch freighter *Leerdam* was inspected and allowed to sail after having traded

some fresh bacon and fifty eggs for a bottle of cognac for the master. Otherwise, the sea was empty.[14]

From shortly after the commencement of hostilities, when it became clear that the Allies were gathering their merchant ships in convoys, Dönitz was almost obsessed with concentrating his limited number of U-boats against them rather than spreading them out looking for ships running alone. This required both intelligence and boats in the area though.

During the second week of October 1939, intelligence available to the BdU indicated several convoys converging on the south-west coast of Ireland. The number of U-boats at sea was not what Dönitz had hoped for, but the opportunity had arrived for the wolfpack tactic to be tested. Korvettenkapitän Werner Hartmann in *U37* was senior captain at sea and given command. Gruppe Hartmann would be the first attempt of a coordinated attack and it revealed several important challenges. In the event, only *U46* and *U48* were able to respond to the order to gather on *U37* when a convoy was encountered.

U48, second patrol. On 14 October, the 3,677-ton *Sneaton* (Master Thomas Grainger) travelling from Cardiff to Rio de Janeiro with coal was stopped by gunfire south-west of Cape Clear and the crew abandoned ship. The survivors were picked up by the Belgian tanker *Alexandria André* and landed at Weymouth.



After the crew had taken to the boats, *Sneaton was* sunk by a single torpedo. (Author's collection)

At 09:08 on the 17th, a signal was picked up on board *U48* from Kapitänleutnant Herbert Sohler of *U46*, saying he had sighted a convoy, asking for back-up. Schultze immediately set course for the position given. By nightfall, two darkened vessels were seen ahead, part of inbound convoy HG-3 to Liverpool. The first, 7,256-ton *Clan Chisholm* (Master Francis Stenson), with 3,300 tons of tea, 1,900 tons of jute, 1,750 tons of pig iron and 2,600 tons of general cargo, was targeted by two torpedoes from *U48*, fired from a surface position, at around 20:32. One was a *Versager* and did not explode. The second did and *Clan Chisholm* went down some 150 miles north-west of Cape Finisterre. Four crewmembers were lost. The master and forty-one survivors were picked up by the Swedish *Bardaland* and landed at Kirkwall. Thirty-two others were picked up by the Norwegian whaler *Skudd IV* and the troop transport *Warwick Castle*.

Shortly after *Clan Chisholm* was torpedoed, a destroyer was sighted. It passed around 300–400 yards to port of *U48* at full speed on an opposite heading, towards the sinking freighter and nobody on board the destroyer seemed to notice the low silhouette of the U-boat against the dark sea. Schultze decided the chance was too good to miss and risked a shot from the stern tube. The torpedo was fired, but nothing happened in spite of the short distance. Another faulty torpedo had saved what appears to have been the destroyer *Escort*.

When at a safe distance from the destroyer, a further two torpedoes were fired at the second darkened vessel sighted earlier. This was the 7,968-ton *Sagaing*, but both torpedoes were *Versagers* or missed and she got away unharmed. These were Schultze's last torpedoes, but he stalked the ship during the night to see if a chance to use the gun might emerge. At 03:45 on the 18th a signal was received from the BdU ordering *U48* home, but Schultze continued to follow *Sagaing* during the night and, as expected, she met with the rest of convoy HG-3 at dawn. A sighting signal was submitted to *U37* and *U46* but before *U48* could get into position to use her gun, she

was forced down by an escorting destroyer. Schultze went deep, below 400 feet, at one time as deep as 430 feet – a depth not reached before the war. Thirty-one depth-charges were heard, but none was really close. By the time *U48* was able to surface again, the convoy was gone and course was set for home. The next day, the 4,892-ton freighter *Rockpool* presented too good a target to pass unmolested and was attacked with gunfire. She brazenly fired back, though, starting a proper gunfight. Schultze decided it was too risky to continue and when a destroyer appeared on the scene, he dived and continued for home.[15]

HG-3 was just what Dönitz had been waiting for. Nevertheless, Hartmann's attempt to control the small wolfpack by radio from one of the boats at sea proved inefficient. In addition to *U48* sinking *Clan Chisholm, U37* sank *Yorkshire* and *U46* sank *City of Mandalay*, but for all practical purposes the boats operated independently. Dönitz decided it would be better to maintain control of future wolfpacks from ashore. It does not appear that anybody in the Admiralty realised that new tactics had been tested on convoy HG-3.[16]

With five merchant ships sunk for a total of 37,153 tons, *U48* returned to Kiel on 25 October, having spent twenty-two days at sea. It is noteworthy that of the eight ships sunk during the first two war patrols, only one, *Clan Chisholm*, which was in a protected convoy, was attacked without warning. All the others were stopped according to the Prize Regulations and there were only nine fatalities from the eight ships, including four from *Clan Chisholm*. Several of the freighters intercepted by *U48* were armed and most fired back when shot at or ordered to stop and used their radios to call for help. Both actions are understandable, but nevertheless not in accordance with the Prize Regulations.[17]

The 7,256-ton *Clan Chisholm* (Master Francis Stenson), sunk by *U48* on 17 October 1939. (Author's collection)

Poor Weather

U48 commenced her third patrol late in the evening of 20 November 1939. *U47* had left four days earlier, followed by *U35*, while *U31* would leave the next day. During the night, Schultze took his boat through the Kaiser Wilhelm Canal and, having passed the Brunsbüttel gates by 06:50, followed a minesweeper through the danger areas into the North Sea. *U47* and *U48* were instructed to head for the Fair Isle Channel and to spend a few days around the Orkneys before heading into the Atlantic. British destroyers and aircraft made it necessary to dive on several occasions and progress across the North Sea was relatively slow.

In the evening of 25 November, the Swedish 6,336-ton tanker *Gustaf E Reuter* was sighted in the Fair Isle Channel. Schultze decided she was legal prey in spite of being illuminated and moved his boat into position for a surface attack.[18] The first torpedo was a *Versager* and Schultze gave chase while preparing for a second shot. Just as everything was reported ready again, a destroyer was sighted and *U48* turned away into the darkness. She was not sighted from the warship and an hour later, some 14 miles west-north-west of Fair Isle at 00:30 on the 26th, the second torpedo was fired at *Reuter* from around 1,500 metres. It ran true and exploded in the foreship of the tanker. To Schultze's delight the Swedish captain sent an SOS signal that his ship had hit a mine and, content that his position was not compromised, Schultze left the tanker to its fate and steered east of the Orkneys to see if there were more ships to hunt.[19]

Next morning, the ABV *Kingston Beryl* found the drifting tanker off Sumburgh Head. Most of the survivors were taken off and transferred to the rescue tug *St Mellons* coming out from Kirkwall. *St Mellons* took *Reuter* in tow, but a severe gale mounted and the tow broke. Later the bow of the tanker broke off too; whereafter the stern was sunk by *Kingston Beryl*.[20]

The atrocious weather made Schultze try his luck in more sheltered waters north of Sumburgh Head in the Shetland Islands. To his surprise, he found the harbour at Lerwick unguarded and empty. On the way out a cruiser was sighted inbound, apparently seeking shelter from the storm. Schultze turned around but the cruiser was lost in a hailstorm and could not be re-found. Instead, a freighter escorted by a destroyer was sighted outside, in open water. In spite of the poor weather, two torpedoes were fired. The first missed and the second exploded prematurely. The destroyer came searching for them, but soon gave up and no depth-charges were dropped. Schultze conclude that the pair behaved so strangely that it was a trap set up to make him to expose his boat on the surface. Two torpedoes had been spent with no gain whatsoever.

A couple of hours later, a second similar pair were sighted and shortly after *U48* ran into a group of destroyers protecting a single freighter. Schultze was convinced it was another trap and stayed at a distance. Just before dawn a third group of ships was sighted, four or five destroyers circling a single freighter. This time *U48* was discovered by the Asdic operator of one of the destroyers before she could get away and a chase initiated that would last all morning. In all, some thirty depth-charges were counted, some very near the U-boat. By skill and good fortune, Schultze managed to keep his boat deep and by midday they were out of harm's way. To the relief of his men, *Vaddi* Schultze had brought them through again and, even though it had been a frightening experience, they agreed they had the best Kommandant ever and started changing the broken bulbs, replacing the gaskets and stopping the leaks.[21]

The extremely poor weather persisted and, on 30 November, Dönitz issued orders for *U47* and *U48* to head into the Atlantic. Weather was not much better west of Ireland and progress southward was slow, all the more so as the heavy seas and low visibility kept them submerged most of the time. Not until the morning of the 8th did two ships come into sight west of

the Scilly Isles. A handful of trawlers were also near, and Schultze assumed these to be A/S auxiliaries, but most of them were probably harmless fishermen. The 6,668-ton British freighter *Brandon* ventured near enough to take a torpedo from *U48*, sinking in ten minutes.[22] The second freighter, followed by at least one of the trawlers, headed away at speed. Schultze, assuming the trawlers to be armed, stayed submerged and did not pursue. The survivors from *Brandon* were picked up by two Belgian fishing trawlers and landed at Milford Haven. Nine men perished.

Having moved away from the trawlers, Schultze surfaced to see if he could find the second freighter. Instead, a small convoy hove into sight. Just as Schultze gave orders to dive, preparing to attack, an aircraft was sighted, approaching fast. *U48* was already on the way down, but very shortly after she had submerged, four Cooper bombs exploded close to the boat. They were small and not really dangerous unless they made a direct hit, but almost all the lightbulbs broke, throwing the boat into darkness, and chaos ensued. Within a few minutes, Schultze had his boat under control again, as usual taking her deep. Soon after, however, a destroyer of the convoy escorts had them pinned by Asdic and a serious attack commenced. Once again Schultze out-guessed the British on the surface, moving port and starboard by instinct and keeping *U48* below the level of the depth-charges. Eventually he set the boat on the seabed at Cockburn Bank, shutting down everything that could make sound.[23] Ten charges exploded directly above and *U48* was a hair's breadth from destruction. Instruments failed, water poured in from numerous leaks and most lightbulbs went out again. Panic at this stage would have spelled havoc, but *Vaddi* once again kept control, taking the boat carefully off the seabed. To everybody's relief, the propeller noises at this stage slowly died out as the destroyer hastened after the convoy. Schultze surfaced and headed away in the opposite direction, through a number of trawlers that were too busy fishing to bother him.

Damage was severe, but the crew of *U48* worked through the night to get the boat back into fighting condition. A small convoy with two escorts sighted during the night was left alone as the boat was not ready to take another beating. When at 06:30 next morning, 9 December, a darkened tanker was sighted, Schultze nevertheless decided it was worth a try. 'The depth-charge psychosis needs to be shaken off,' he wrote in the KTB – undoubtedly by himself too – and the best medicine would be a successful attack. The first two torpedoes gave no results but the third exploded amidships, sending the 7,397-ton British *San Alberto* to the bottom. Bravely, the radio operator stayed until the end, sending SSS signals, but as he added no position, his efforts meant little. *U48* hastened away. 'This success was our revenge for the wicked depth-charge attack!' Schultze wrote in his KTB, letting his own relief shine clearly through.

On the 11th, Prien of *U47* informed Schultze he was heading for home. *U48* had torpedoes left in her tubes, though, and headed south as Schultze felt the current area had become a bit too hot. Amazingly, *U47* and *U48* met on the 12th, south of Ireland. Schultze and Prien exchanged experiences via hailers and wished each other safe journey home, before they steered different courses again.

On the 13th, one freighter got away as the torpedo fired at it missed or went too deep and exploded beyond the target. Two days later, on the 15th, the 5,217-ton Greek freighter *Germaine* was intercepted. Being en route for England with grain, she was duly sunk after the crew had taken to the boats. They were soon picked up by the Norwegian freighter *Venland*. After this, Schultze headed for home, passing through the Fair Isle Channel into the North Sea on the 19th. He had sunk four ships for around 25,000 tons, but spent a painful number of torpedoes doing so and missed out on several more targets. *U48* would require substantial time in the yards and had been close, very close, to not returning at all.[24]

Having spent the morning of 21 December with Dönitz, going through the events of the patrol, Schultze saw to it that *U48* was taken care of and the crew dismissed for Christmas leave. Then he sat down to summarise his experiences after three war patrols. The document is unique and gives a deep insight into his thinking. Among other things, he wrote:

The performance of the crew and the boat fully meets, and in some cases exceeds, the expectations we had from before the outbreak of the war. The spirit and mood of the men depends on leadership and success, which then becomes important for the resilience of the crew. Maintaining routine with regular sleep, meals and watches is key for keeping the crew on top, as is holding on to discipline, etiquette and cleanliness. Upholding important tasks such as torpedo maintenance is also vital for the morale and wellbeing of the men. […] It is recommended to keep crews together as much as possible and not rotate men between boats. If necessary, never change more than two to four men away from any boat at a time. Change of senior warrant officers must only take place with the consent of the Kommandant. […] Fear during depth-charge attacks is unavoidable, but it helps to pray or think 'it will soon be over' or 'die with dignity' if one thinks that all means of escape have been exhausted. […] The pressure hull is superb, as documented by the depths we have had to dive to. The engines and motors are reliable and give us few problems. […] Use of the gun is hampered by the low freeboard of the boat and in anything but moderate seas, can only be used when going directly against the waves. […] The torpedoes cause severe frustration at times. Even accounting for regular misses and faulty adjustments, the number of inexplicable failures creates unease and a lack of trust in the most important weapon of the U-boat.[25]

Depth-charges

U48 would be at the Germania-Werft until 20 January. At the start of her next war patrol in late January the propellers became damaged by ice and Schultze had to take her back for further repairs and only on 30 January did *U48* head out of the Jade for her fourth patrol. This time, there were mines on board, to be laid in Weymouth Bay before heading into the Atlantic. Passing through the North Sea, the Fair Isles Channel and west of the Hebrides was uneventful. A couple of A/S trawlers were sighted but easily avoided in the foul weather. A small 900-ton Norwegian freighter, neutral and not worth sinking, was kept at ease with signalling in English, wishing 'Good Voyage'.

On 7 January, south of Ireland, a torpedo was fired from a long distance on what was believed to be an armed merchant cruiser. The torpedo missed as the course of the target was falsely marked in the plot. Schultze surfaced but *U48* could not maintain speed in the high waves and the ship disappeared.

In the afternoon of 8 February, *U48* entered the British Channel from the south-west. There were several A/S trawlers around and Schultze kept his boat submerged along the Dorset coast to avoid detection. After dark, he surfaced, turning into Weymouth Bay close to midnight. The mines were laid off Weymouth without any problems and by the early morning of the 9th, *U48* was heading out of the Channel towards the Atlantic.

Next day at 17:03, the 6,853-ton Dutch freighter *Burgerdijk* on its way from New York to Rotterdam with wheat, beans and miscellaneous goods for Holland was stopped south-west of the Scilly Islands after being stalked for three hours. An officer came across to *U48*, bringing the papers. These showed that the ship had received instructions to go through a British port en route and Schultze decided *Burgerdijk* was carrying contraband. Captain Scriwanek, his crew and the passengers were ordered into the lifeboats and, at 18:40, the Dutch vessel was hit by a single torpedo amidships and sank. The survivors were picked up by the Dutch merchantman *Edam* shortly after. There were no casualties.

Because of having had to carry the mines, *U48* had only eight torpedoes and, having spent two already, and as the sea was relatively calm, Schultze decided to bring the two external torpedoes into the pressure hull. This took some time, but by nightfall all six remaining torpedoes were in the tubes or in the torpedo room. In the morning of the 12th a convoy of some fifteen to twenty ships, escorted by four destroyers and a flying boat was sighted. Having laid the mines and moved the torpedoes, *U48* had become unstable and while this was corrected by the chief engineer, Schultze decided to shadow the convoy, sending regular position reports.

Meanwhile, in Germany, the B-Dienst had intercepted and decrypted a series of signals regarding the return of *Ark Royal* with four destroyers to Britain from the South Atlantic, with *Renown* and *Exeter* close behind. The carrier would, from what was known, head for port in the south of England through the Channel. Hence, at midday on 12 February, a signal from Dönitz ordered *U26*, *U37* and *U48* to take up positions in the western Channel to catch *Ark Royal*. This signal was transmitted more or less at the same time as the first signal from *U48* arrived that she was stalking a convoy south of Ireland. Schultze, believing that several boats were closing on him to make a wolfpack, decided to stay with the convoy rather than take up the waiting position designated in the signal from the BdU. This created some misgivings in Sengwarden – all the more so as the convoy was lost during the day, while *Ark Royal* and her escorts docked in Portsmouth on the 15th, unmolested.[26]

Having lost the convoy, another day was wasted searching an empty sea until, at 15:55 on the 14th, the 12,306-ton British merchant *Sultan Star* was sighted, heading for Liverpool with meat, butter and other goods. There was an aircraft above and destroyer propellers could be heard, so Schultze assumed she was being escorted.[27] Hence, about an hour later, from periscope depth, he sent one torpedo into the freighter, hitting her on the starboard side aft. One man was killed by the explosion and Master William Bevan ordered the rest of his seventy-man crew to the boats. Chief Wireless Operator P G Winsor stubbornly remained in his office, sending distress signals while his ship was going down, escaping only at the last minute by jumping into the icy sea.[28]

The *Sultan Star* had been sighted from the *Exeter* a few hours earlier and, acting on the distress signal, two of her escorting destroyers, *Vesper* and *Whitshed*, were sent to investigate. Arriving some forty minutes after the torpedo had hit, they soon located *U48* and gave her a pounding of the hardest sort. IWO Suhren recounted:

At 120 metres, eight depth-charges shake us, one after the other. They are pretty accurate. We lurch this way and that and move at a crawl. Then we can clearly hear the enemy Asdic, ping, ping, ping. He has pinned us down good and proper. From the engine-room comes the report: 'exhaust valves making water!' The Kommandant orders: 'Zürn, see to it that the valves are closed as far down as they'll go.' Zürn reports back that despite all their continuing efforts we're still shipping a small amount of water. Now the ear has to take over for the eye. […] The propeller noise [of the destroyers] pass over us and sounds like a long fingernail scraping on a dinner-plate. Right away I pick up the faint bubbling sound of the falling depth-charges; then I give the radio-operator the headphones back. The charges are about to go off. An explosion, hard as steel and then five more in succession. Peng-whamm! The Kommandant changes course to the west.[29]

The chase continued for about two hours, during which twenty-two depth-charges were counted; some uncomfortably near, but not quite as bad as in December. *Vesper* and *Whitshed* believed they had actually sunk *U48* and left in high spirits, having picked up the survivors from *Sultan Star*. At 19:20, *U48* was back on the surface. In the following days, the 8,971-ton Dutch tanker *Den Haag* and the 3,396-ton Finnish *Wilja* were also intercepted and sunk.[30] This left only one torpedo in the after tube and Schultze set course for home, arriving in Wilhelmshaven on 25 February. Dönitz made it clear that he believed it had been a wrong decision to follow the convoy rather then get in position for *Ark Royal* as instructed, but left it at that. Herbert Schultze had the highest score of the U-boat captains (109,074 tons) and was about to receive the Knight's Cross – and everybody could make a mistake as long as a lesson was learned from it.[31]

U48's first officer, Oberleutnant Reinhard 'Teddy' Suhren. (Author's collection)

Kapitänleutnant Schultze on 2 March 1940, having just received the Knight's Cross from Adolf Hitler. He was only the second U-boat commander to receive the coveted *Ritterkreuz*, after Prien, who received his in October 1939 for sinking *Royal Oak* at Scapa Flow. Later in the war, Knight's Crosses with Oak Leaves and even Swords would become almost a trademark for the successful U-boat captains. (Author's collection)

— 13 —
The Bull of Scapa Flow

The Boldest of Enterprises

THE SINKING OF THE battleship *Royal Oak* by *U47* at Scapa Flow has become one of the most controversial events of the early WWII at sea. This is partly because of the audacious way in which it was accomplished, partly because of the significance it had on the war at sea, but not least because of the many mysteries and legends surrounding the event. Added to the sinking of *Athenia* and *Courageous*, the loss of *Royal Oak* brutally forced the British Admiralty to take the threat from the U-boats seriously, changing the development of the Royal Navy forever.

During WWI, Scapa Flow became the most important anchorage for the Royal Navy in home waters. By 1920, the cost of keeping the Home Fleet there resulted in its withdrawal and demobilisation of the base's defences. The flags were hauled down, the booms and minefields were removed and the gun emplacements abandoned. From 1924 onwards, the only activity at the anchorage was the continued removal of the sunken German warships, scuttled in 1919.

In 1938, Admiral Forbes took the Home Fleet to the Orkneys for an inspection of its defences. Finding them grossly inadequate, he made a long list of recommendations for securing a proper defence of the anchorage, including the purchase of a large concrete barge to serve as the first of a new series of blockships across Holm Sound. Most of his suggestions went unheeded until the summer of 1939, when Scapa Flow had been re-established as a base for the Home Fleet and Forbes addressed the defences

of the anchorage again, this time supported by the Admiral Commanding Orkneys and Shetland (ACOS), Wilfred French.[1]

The building of a civil airport with tarmac runways at Hatston outside Kirkwall in the Orkneys began in early 1939. The Admiralty saw the advantage of this in the defences of Scapa Flow and contributed funds to accelerate the construction as well as adding hangars, seaplane facilities, workshops and fuel storage. By August 1939, the runways were operational and 771 Naval Air Squadron moved in permanently, while 800 Squadron disembarked its Skuas from *Ark Royal* in what was to become routine land-based intervals for the FAA pilots.[2] Later, other subsidiary airfields and landing strips were built at several places around the Orkneys to enhance the air defence of Scapa Flow, where RAF fighters would also be stationed – the most important at Skeabrae. When stationed on land, operational control of the FAA squadrons in the north was held by RAF Coastal Command at Wick.[3]

On 15 and 16 September 1939, the newly appointed First Lord Churchill visited Scapa Flow, accompanied by his flag lieutenant and aide-de-camp Lieutenant Commander Charles Thompson. Among the issues discussed with Admirals Forbes and French were their previous suggestions as well as a revealing memorandum from the CoS Committee where it was concluded that adequate defences at Scapa Flow would not be complete until early 1940. Hearing from the two admirals in person that they both feared the entrances to the anchorage were not safe, Churchill issued orders for nets, booms and blockships to be deployed urgently as well as A/A guns, patrol craft and searchlights. At first, two more blockships were ordered to close the most obvious gaps. By October 1939, the first, *Cape Ortegal*, had been put in place in Skerry Sound and the second, *Lake Neuchatel*, was being prepared to go into Kirk Sound. None of the four eastern entrances was completely closed off, though, and land-based observation posts and defences were very limited. A/A guns and

searchlights had been ordered, but – except for a few minor gun posts – not yet installed. Inside the anchorage, a patrol force of five to six drifters were in operation, focusing on the entrances at Hoxa and Hoy Sounds, but there were rarely more than two or three on patrol at a time.[4]

In Germany, Dönitz studied the intelligence regarding Scapa Flow with interest. He was under no illusion that it would be easy to penetrate its defences – two such attempts having failed during WWI.[5] In his own words, it would be the 'the boldest of bold enterprises', requiring not only nerves of steel but also a good portion of luck. Still, he instructed Kapitänleutnant Victor Oehrn to gather what intelligence there was, to see if it were possible to find a way in. General Hellmuth Felmy, C-in-C of Luftflotte 2, was eager to assist and initiated several special flights over the Orkneys to improve the aerial coverage.[6] Based on the photos, Dönitz and Oehrn concluded that the only feasible way into Scapa Flow would be through Kirk Sound – at night during slack water. Dönitz noted that the sound appeared to be blocked:

> by two merchant ships, apparently sunk, which lie diagonally across the channel of Kirk Sound, and a third vessel to the north of the other two. South of these, as far as Lamb Holm, is a narrow channel about 15 metres wide, in which the depth is about 6.5 metres and on either side of which are shallows. To the north of the sunken ships is a further small channel. The shores on both sides are practically uninhabited and I think it will be possible to penetrate here – by night, on surface at slack water. The main difficulty will be navigational.[7]

The choice of the man to lead such a mission would be critical:

> My choice fell upon Kapitänleutnant Prien, the captain of *U47*. He, in my opinion, possessed all the personal qualities and the professional ability required. I handed over to him the whole file on the subject and left him free to accept the task or not, as he saw fit.[8]

On Surface at Slack Water

In a meeting with Raeder, Dönitz received approval to go ahead, and Kapitänleutnant Prien was summoned in the afternoon of Sunday 1 October. At the meeting, Kapitänleutnant Horst Wellner, the Kommandant of *U14*, presented a report from a reconnaissance patrol to the Orkneys a few days earlier, after which Dönitz took the lead, revealing that an attack on Scapa Flow was being planned.[9] It would be dangerous, he said, but had the potential for a dramatic reward. Prien was given forty-eight hours to study the information and make up his mind whether he thought it would be possible. He later wrote: 'I felt great excitement within me. Would it be possible to bring off? My common sense calculated and questioned the chances, but my will had already decided that it could be brought off. At home, supper was already on the table. I greeted my wife and child, but my thoughts were incessantly on Scapa Flow.'[10]

German aerial photo of Kirk and Holm Sounds. The photo is dated 8 October 1940 and there are more ships blocking the Kirk Sound than a year earlier when *U47* entered and departed Scapa Flow through it. The single ship to the north-east of the main row is *Numidian. Soriano* and *Thames* are in the central parts of the row. The ships that can be identified to the north and south of them had been placed there since Prien's attack. (Scran Trust Collection 000-000-182-789-R)

The thirty-one-year-old Günther Prien had enrolled at the Seaman's College (Deutsche Seemannsschule) outside Hamburg at the age of fifteen and, when he graduated from there, had joined the merchant navy. Eight years later, in 1932, he earned his captain's certificate, only to be thrown into unemployment on the back of the German economic crisis. In January the following year, though, he was one of fifteen merchant officers accepted by the Reichsmarine as officer cadets that year.[11] After a period of service on the cruiser *Königsberg*, Prien obtained his commission and was transferred to the U-bootwaffe in October 1935 with the rank of Leutnant zur See. Within two years he was promoted to Oberleutnant and appointed watch officer on *U26* under Werner Hartmann. In December 1938, Prien was given command of *U47*, a Type VIIB U-boat and, three months later, promoted to Kapitänleutnant.

During the May 1939 Kriegsmarine War Games, Prien was deemed the most aggressive commander, achieving the highest results. He was definitely calm and focused in most situations, but few have much positive to say on his personality. Introverted, stubborn and impetuous in nature with a quick temper, he does not appear to have been much liked, by either his colleagues or crew.[12] When war was declared in early September, Prien and *U47* were in the Atlantic. A handful of neutral vessels were left to proceed, papers and cargo in order, but on 5 September, the 2,407-ton British freighter *Bosnia* was stopped with gunfire about 120 miles north-north-west of Cape Ortegal and sunk by a torpedo. Within three days, a further two British freighters, *Rio Claro* and *Gartavon*, were sunk before *U47* returned to Kiel on 15 September, having been at sea for twenty-eight days.[13]

In the evening of 1 October 1939, having spent the day going through the maps and intelligence reports, Günther Prien was becoming confident it would be possible to penetrate the defences of Scapa Flow. Already by the next day, Monday 2 October, he was back, asking to see Dönitz, and confirmed without hesitation that an attack on Scapa Flow was feasible.

The FdU reminded him of the risks, but Prien was adamant: it could be done and he was the man to do it. ‘Very well, then,’ said Dönitz, ‘get your boat ready.’[14]

Kapitänleutnant Günther Prien (Author’s collection)

The date for the attack, Special Operation P, was set for the night of 13/14 October, when the tide would be high and both periods of slack water would take place during the hours of darkness. This meant departure would be on the 8th and there was no time to lose. Returning to his boat, Prien ordered *U47* to be prepared for its next patrol. G7e electric wakeless torpedoes were to be used and a full load was taken on board. Everything else that was not strictly needed, including all private gear, provisions and spare fuel, were left behind to make the boat as light as possible. The crew could sense that something was stirring, but security was tight and only the first officer, Oberleutnant zur See Engelbert Endrass, and chief navigator Obersteuermann Wilhelm Spahr were informed of the task ahead. Departing Kiel as planned in the evening of the 8th, Prien took *U47* through the Kaiser Wilhelm Canal to Brunsbüttel and into the North Sea. There were forty men on board: Prien, Endrass, Spahr, second officer Oberleutnant zur See Amelung von Varendorff, leading engineer Oberleutnant zur See (Ing) Hans Wessels and thirty-four petty officers and seamen. At the SKL, it appears that very few other than Admiral Raeder, who had been informed verbally by Dönitz, had any idea that this was no regular patrol.[15]

Unbeknown to Prien, and presumably Dönitz, the Kriegsmarine was about to initiate a parallel operation that would actually influence the results of *U47*'s mission dramatically in a negative manner. This mission had been planned by Admiral Saalwächter, C-in-C of Marinegruppenkommando West, who, for security reasons, was unaware of *U47*'s mission. Twenty-four hours before the departure of *U47*, on 7 October, *Gneisenau* and *Köln*, supported by nine destroyers, took to sea from Wilhelmshaven under the command of Admiral Boehm, steering for Utsira Island off south-western Norway. The foray had two purposes: to take some pressure off the *Graf Spee* and *Deutschland* operating in the Atlantic and to lure the Home Fleet within the range of the Luftwaffe's bombers, waiting at bases in Germany. Why Raeder did not see the potential consequences of staging both

operations at the same time remains unknown. Perhaps he never believed Prien would succeed.

Saalwächter's trap worked beyond all expectations. A Coastal Command Hudson from 224 Squadron sighted the ships in the afternoon of the 8th on a northward course near Utsira, and Admiral Forbes concluded that a German force was making its way into the Atlantic. He took to sea with the Home Fleet as well as the Humber Force to intercept. More or less at the same time as *U47* left Brunsbüttel, heading into the North Sea, *Hood, Repulse, Nelson, Rodney* and *Furious*, screened by the cruisers *Aurora, Sheffield, Newcastle* and destroyers headed away from the Scottish coast. *Royal Oak* also took to sea, but could not keep up with the fleet and was sent to patrol the Fair Isle Channel with two destroyers. By the time Forbes was closing the Norwegian coast with the Home Fleet, Boehm had turned south-eastwards and was safe into the Skagerrak, heading for Kiel.

Weather in the North Sea was atrocious at this time and, in spite of almost 150 German bombers searching for the British fleet, only the Humber Force cruisers were found and bombed (see Chapter 16). No ships were hit, but Admiral Forbes ordered *Hood, Nelson* and *Rodney* to Loch Ewe, beyond the range of the German bombers, where they arrived on the 11th. *Royal Oak, Repulse, Furious, Newcastle* and *Aurora* returned to Scapa Flow while *Sheffield* remained at sea in the Denmark Strait.

A German reconnaissance aircraft noted the presence of *Royal Oak, Repulse* and *Furious* while flying over Scapa Flow at 15:00 on the 12th but, shortly after, *Repulse*, escorted by *Fame* and *Foresight*, left the anchorage for Rosyth. *Furious* departed a few hours later for Loch Ewe with *Foxhound* and *Fearless* while the cruisers *Glasgow*, *Dunedin* and *Newcastle* headed into the Atlantic to cover a series of convoys.[16] *Royal Oak* dropped anchor in her usual position under the cliffs at Gaitnip in the northeast corner of the anchorage. From here, her guns could be used against air attacks on Kirkwall and the radar station at Netherbutton. The

aircraft tender *Pegasus* was anchored in the position which the *Repulse* had vacated, some 1,350 yards north of *Royal Oak*. In all, there were around fifty naval vessels in Scapa Flow at nightfall on 13 October. Besides *Royal Oak* and *Pegasus*, these included ACOS's flagship *Iron Duke*, the cruisers *Belfast, Aurora, Curlew, Cardiff, Caledon, Colombo* and *Delhi* in addition to five destroyers, five minesweepers, ten armed merchant cruisers and a number of smaller vessels.[17]

The first days of the journey were uneventful for Prien and his men. The route was carefully planned to avoid any contacts. Daytime was spent lying on the seabed and radio silence was absolute. In addition, all other U-boats had been withdrawn from the Orkneys to avoid stirring any accidental alarms or searches that might have endangered *U47*.

At 04:37 on Friday 13 October, Kapitänleutnant Prien set his U-boat smoothly on the seabed at 300 feet depth east of the Orkneys and gathered the crew in the torpedo room forward to make an announcement. He went straight to the point: 'Tonight, men, we will be entering Scapa Flow.' Prien later wrote that he 'could hear the dripping of water on the metal floor' and added, 'I am determined to get you in there, do what they want me to do and get you out again.' There was nothing more to say or do; Prien ordered the men on watch back to their stations and the others to rest while they could.[18]

Battleship *Royal Oak*, September 1936. (W&L)

On his returning to the control room, a disturbing report waited for Prien: the lubricating oil was found to have water in it. Only 7 to 8 per cent, but unacceptable if the engines were to operate extensively at full effect, a prerequisite for the success of the operation. Chief Engineer Wessels was called and told that unless he could solve the problem during the day, the mission would have to be aborted. Meanwhile, demolition charges were rigged forward, aft and in the control room with one man assigned to each charge should the boat run aground or risk being captured after the operation had started.

Aircraft tender *Pegasus*. (W&L)

By 19:15 the time had come and Prien ordered his crew, who had just finished dinner, to action stations. When all was reported ready, *U47* was carefully taken to the surface and Prien, Endrass, von Varendorff and Bootsmann Ernst Dziallas climbed the conning tower. To their utter surprise, they were met by a sky lit up by the Northern Lights. The aurora borealis is not common that far south and was totally unpredictable in 1939. The flickering lights exposed *U47* on what was supposed to have been a dark moonless night, but another twenty-four hours on the seabed would be unbearable and the next night would not have such favourable tidal currents. Advised by Endrass, Prien decided to use the extra light to his advantage and ordered the engines to be started. Both worked perfectly and Wessels was congratulated with a job well done. Course was set for Scapa Flow. Spahr and Wessels remained below to steer the boat and operate the engines on instructions from Prien.

Shortly after 23:00, off Rose Ness in the Holm Sound, a ship was sighted and orders were given to dive. The freighter passed overhead, but Prien noted he could not see her properly in either of the periscopes. Inside Scapa Flow it would be necessary to operate on the surface, in spite of the Northern Lights. By 23:31 *U47* was back on the surface, approaching Kirk Sound and the anchorage.[19]

In October 1939, Kirk Sound was blocked by four sunken wrecks, placed to prevent just what Prien was attempting to do. German aerial photographs taken a few weeks earlier had indicated that the wrecks did not entirely close the entrance and this was where Prien was heading. According to a British survey made in May 1939, there was:

[a] 400-ft channel giving 4.5 to 5 fathoms at low water between the broken portions of the blockship *Minieh* and the two-fathoms line on the Lamb Holm shore. There is a gap 136-ft wide between the stern of *Thames* and the stern of *Soriano*. Depth five fathoms at low water. Distance from the bow of *Soriano* to low water level is 400-ft, to high water level 750-ft. Depth at bow of *Soriano* at low water is 3 fathoms.[20]

A little further to the east, with its bow up onto the beach of Mainland east of St Mary's, was *Numidian*. The gap between *Thames* and *Soriano* had been closed by a 30-cm hemp rope, backed up by two 18-cm and one 15-cm cables. In addition, there were several cables strung from the ships towards weighted anchors, helping to hold them in place.

Steering 320º, *U47* was following the tide into Kirk Sound. where conditions were expected to be ideally slack at this time. At least that was what Prien believed until the Northern Lights revealed that they were heading into the much shallower Skerry Sound. Only a panicky turn to starboard and full ahead on both engines brought *U47* over a sandbank and into the mouth of Kirk Sound. Prien wrote:

> A few moments later we have a clear view of Kirk Sound ahead of us. The advantage of having memorised the charts beforehand is obvious, as we are proceeding through the Sound with unbelievable speed. Meanwhile, I had decided to pass the blockships on the northern side. We pass [*Numidian*] at a distance of 15 metres. A moment later, the boat yaws in the current and is swung around to starboard. At the same time, we see the anchor chain of the northern blockship ahead at an angle of 45 degrees.[21]

Running behind schedule due to the dive avoiding the freighter and the navigational error, Prien found the tidal currents stronger than expected. Going with a following tide, the boat yawed, making her course erratic and difficult to steer, but there was no way back. Prien steered north of the northernmost wreck, *Soriano*. At one time, the hull of *U47* became stuck between one of the anchor cables of *Soriano* and the northern bank of the sound. *U47* had been trimmed down to reduce buoyancy, however, and blowing the ballast tanks helped. The U-boat scraped across the cable, very close to the shore, swung back on course and continued.

Suddenly, the partly masked headlamps of a car were turned on, shining across the water towards the U-boat. The men in the conning tower could see trucks and people on the shore, outside the light cone, and expected to have been sighted. The car swung around shortly after the lights had been

turned on, though, heading inland, and nothing ensued.[22] At 00:27 on 14 October Prien noted in his logbook: 'Wir *sind in Scapa* Flow!!!' – 'We are in Scapa Flow!!!' The unthinkable had happened.[23]

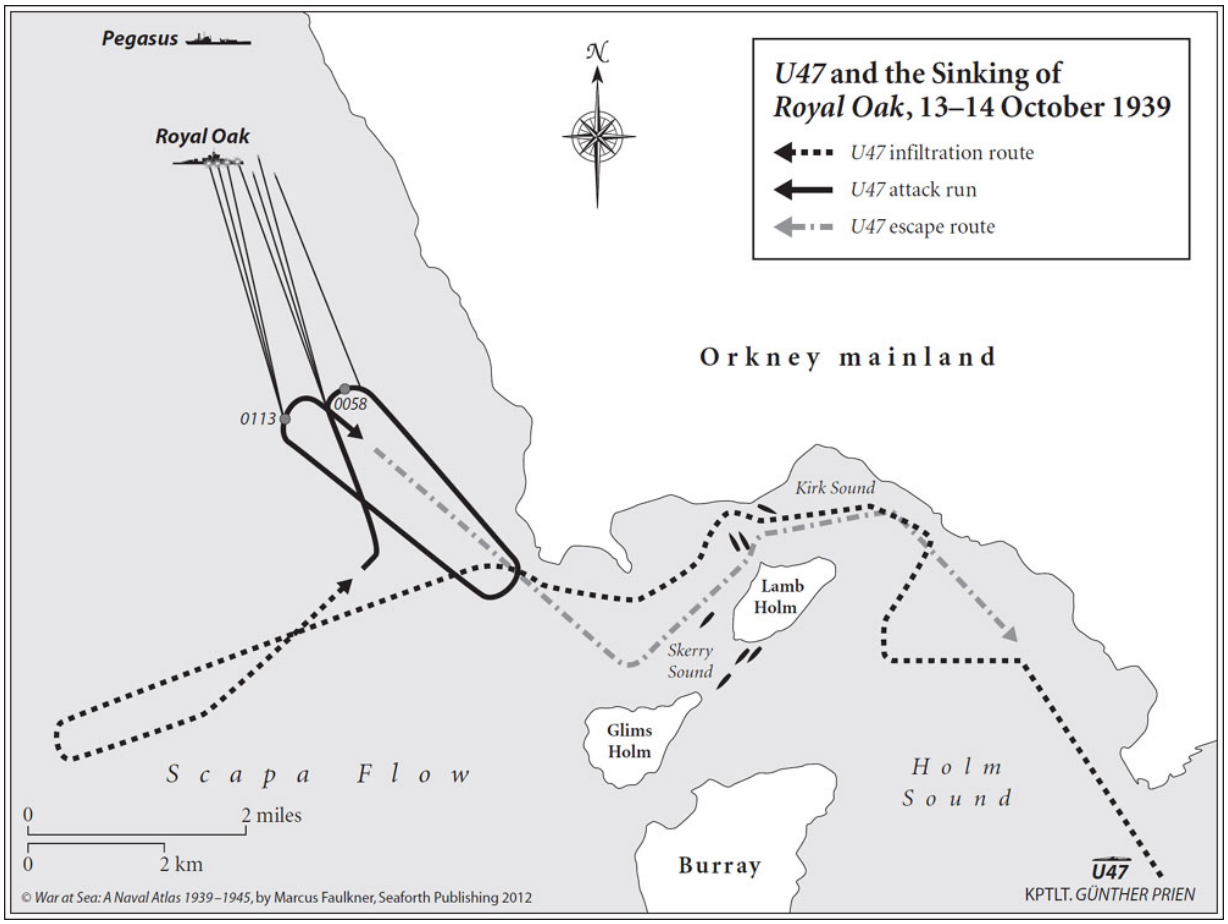
Three Torpedoes from the Bow

From this point on, strange things happened in Scapa Flow and the various reports and narratives differ to an intriguing degree. Some of this may be ascribed to the confusion of darkness, some to adrenalin, and some to the propaganda value of telling the story in a favourable light afterwards – on both sides. Some facts are contradictory, some accounts are obviously flawed, and some episodes remain unclear to this day. Only a handful of the crew from *U47* survived the war – none of them was on the bridge that night. Perhaps Kapitänleutnant Prien was not quite as calm and considered as usually portrayed by the German side and perhaps the eerie Northern Light made him and those on the bridge with him see things that were not there.

At first there was, to the surprise of the men in the conning tower of *U47*, nothing to be seen. No ships, no lights and, above all, no targets. What appeared to be a patrol boat was sighted to port, in Hoxa Sound, but no alarms were sounded and whoever was keeping a watch on board was certainly not looking for U-boats *inside* the anchorage.[24]

Proceeding westward, further into Scapa Flow, Prien and his men failed to sight any of the ships at anchor, either to the north where *Royal Oak* lay, or in the main fleet anchorage to the west where the cruisers *Belfast, Caledon, Colombo* and *Delhi* lay with several destroyers. It is possible that the Northern Lights made the horizon towards the south and west of the U-boat dark. Or perhaps Prien believed he was further into the anchorage than he actually was. The actual visibility in Scapa Flow on this night remains unclear, but it probably rarely exceeded 1.5 nautical miles, in spite of the aurora borealis. There was a fair bit of cloud cover and this most likely

made the effect of the Northern Lights erratic and changeable, which Prien and his men may not have fully realised. After heading some 3 miles on a westerly course, having seen nothing but the Hoxa patrol, Prien decided to turn around:



It is really bright. The whole bay is amazing to look at. South of Cava there is nothing. I head into the Bay. Then I see the Hoxa Sound patrol boat to port, to which we will be a target any second. Then all would be in vain – and there is still nothing to see south of Cava even if visibility is very good. Hence, a decision: There is nothing south of Cava and before every chance of success is lost, we must seek out opportunities that can be exploited. So turn back to port and then follow the coast northward.[25]

Still nothing was seen and Prien, having been more than half an hour inside the anchorage, was bewildered. This emptiness was not what he expected from the intelligence reports he had received. Even below, inside

the boat, an uneasiness spread: What was going on up top? Moving slowly along the mainland coast a shadow finally emerged 10 degrees to starboard in the freakish shadows of the Northern Lights. Peering through his sighting binoculars, Endrass held that it looked like a battleship of the *Queen Elizabeth-class*.[26] Prien agreed, adding that he thought there was another one behind. This was shortly after identified by von Varendorff as being another battleship of the *Revenge-class*. The KTB reads: 'Two battleships are sighted with destroyers at anchor further inshore. No cruiser to be seen.'[27]

Much has been written about the identification of these ships. The fact remains that the ships at anchor in the north-east corner of Scapa Flow on this night were *Royal Oak* and the seaplane tender *Pegasus* to the north of her. The mistaken identity of the second ship (and the mention of destroyers) may have been due to the visibility being much poorer than the officers of *U47* realised and the great stress they were under. The silhouette of *Pegasus* certainly bore no resemblance to anything like that of a capital ship. In addition, she was 2 to 3 miles distant from the tower of the U-boat, and it has never been ascertained how certain Prien and his men were of what they believed they saw. *Royal Oak* was barely observable at all, although closer, and *Pegasus* was half the size of the battleship. It is quite probable that Prien mistook *Royal Oak* for two ships and that he actually never saw *Pegasus* at all. Whatever the reasons for the misidentification, no name of either target was entered in the KTB of *U47*. Somebody has written *Repulse* and *Royal Oak* in pencil on the left margin and on the enclosed map both ships are shown, but these are later additions, not necessarily made by Prien.[28]

At this point, a severe time discrepancy also emerges between the war diary of *U47* and most other narrations. According to the U-boat's diary, she was in position at 01:16. This has been crossed out by somebody and 00:58 has been written in pencil instead. Whatever the time was, Prien gave

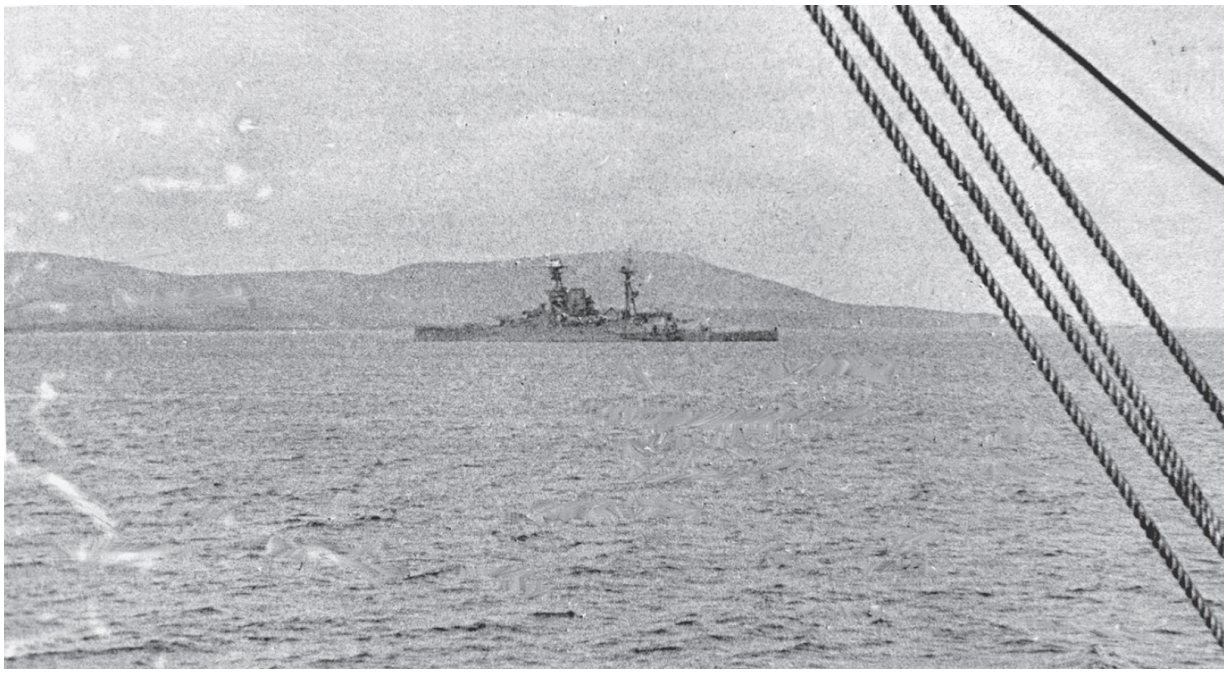
the order for Endrass to launch all four torpedoes from the bow tubes, two at each of the perceived targets. Only three torpedoes were released, though, as the firing mechanism on tube IV malfunctioned. After an unbearable wait of some three and a half minutes, a single explosion was heard. Disappointed, Prien, who assumed the northern ship had been struck, ordered *U47* to turn around and the single stern torpedo to be fired. This was done, but no further results obtained:

> Distance 3,000 metres. Torpedoes set to run at 7.5 metres. Impact detonators. One shot at the northern target, two at the southern. After a bit over three and a half minutes one torpedo detonates at the northern ship. Of the other two, nothing is seen. Turning around. Torpedo fired from the stern tube. Then loading two bow tubes again.[29]

Unknown to Prien and his officers, the explosion heard after the first salvo was not from the 'northern target', but had actually been from a torpedo exploding between 01:04 and 01:05 near the starboard bow of *Royal Oak*. The explosion was relatively modest, possibly as the G7e torpedo detonated prematurely in close proximity to, but not directly against, the hull of the battleship. It is also possible that the torpedo exploded against the anchor chain, some distance from the hull, or that it was deviated by the chain, hitting the hull at an angle large enough to deflect part of the detonation. Adding to the mysteries of this night, some of the survivors describe the first explosion as 'violent', some as 'muffled', while others hardly registered it at all, depending on their whereabouts and activities at the time. Amidships and aft, most men returned to their bunks or their duties, thinking that whatever had happened, it was being handled by those nearest to it and there was no reason for concern.

The captain of *Royal Oak*, William Benn, was awakened by the explosion and rushed forward to investigate. There, he was informed that the commotion most likely came from an internal explosion in the inflammable store. A certain amount of flooding had occurred, but the CO_2 compartment immediately abaft seemed intact and the stability of the ship

had not been compromised. Captain Benn agreed that there was no need to evacuate the ship or take any precautions outside those already initiated: pumping out the water that had entered the affected compartments, securing any leaks and ascertaining nothing was untoward in the magazines. No orders were given for closing watertight doors or deadlights. ‘I had no thought other than that a local explosion had taken place in the inflammable store [and] I felt no uneasiness about the safety of the ship,’ he later told the Board of Inquiry. NCOs were sent through the quarters, ascertaining everything was all right, and most men off duty ‘dropped off to sleep again’.[30] Reginald Nichols, executive officer of *Royal Oak*, related:



Royal Oak seen from cruiser *Caledon* of the Northern Patrol. The photo was taken either on 5 October, when *Caledon* left Scapa Flow for the Atlantic, or on the 13th, when she returned. (E Skjold collection)

That night, as usual, we darkened ship and were alert to air attack. I turned in at about 10:30 pm, only to be awakened by a heavy shaking of the ship. The time was four minutes past one. Throwing on a coat I went on deck but no one could tell me what had happened so I continued forward to the forecastle where there was an acrid smell. I could see by the light of a faint aurora that the stopper on the starboard cable had parted and cable run out to a 'clinch'. Evidently the trouble was below in the cable locker flat where I found the Captain and Engineer Commander. It seemed an explosion had occurred in the inflammable store and a man was going down in smoke helmet to investigate.[31]

Back in *U47*, there was some bewilderment as no reactions appeared to have been aroused by the firing of the torpedoes and the explosion of at least one of them. Eventually, Prien, who had ordered an immediate loading of the two spare torpedoes in the forward tubes, decided to try again. The problem with the tube failing to fire the first time had been corrected and, with three torpedoes ready, the U-boat was back in firing position, some 2,700 yards away from *Royal Oak*, at around 01:13, less than ten minutes after the first torpedo struck. This time, Prien fired the torpedoes himself. Believing that the 'northernmost' target had already been hit, all torpedoes were aimed at the 'southernmost' target:

Three torpedoes from the bow. After less than three minutes they detonate on the nearest ship. The boat is rocked by a great explosion, followed by crashes and rumblings; then columns of water followed by fire. Fragments fly through the air. The bay bursts into life. Lights come on in the destroyers and Morse signals start flashing from all quarters. Ashore, about 200 metres from me, cars start whizzing up and down the roads. One battleship sunk, one damaged and three torpedoes went to hell.[32]

Content, Prien once more ordered his boat on a southerly course, away from the scene of carnage he had created. Convinced that the British must have realised what was going on and that he had achieved as much as he could this night, he decided to depart the way he had entered, through Kirk Sound. All torpedo tubes were empty and, although there were still five torpedoes on board, these had not been made ready and would need time to reload. In addition, if – as he probably believed from the exaggerated descriptions of light and signalling – a search had been initiated, staying on

the surface as he had done so far would be impossible. Finding further ships in the apparently empty anchorage while submerged must have appeared futile. Later, Prien told journalists that he:

> heard two explosions and saw a column of water rising from the British ship lying farthest north. A moment later the other ship exploded. I saw parts of her blown into the air, and then the whole ship disappeared. I realised that the northern ship was seriously damaged too. She had two funnels which prove that she was not *Royal Oak*.[33]

This is not in accordance with what happened, and Prien must have known that he was stretching the truth. Whether this was deliberate to confuse British intelligence or an elated exaggeration is unclear.

* * *

On board *Royal Oak*, where the three explosions were registered at 01:16, there was no doubt that this time something serious was happening. The first torpedo hit forward of amidships, the second abreast the boiler rooms and the third just forward of No. 3 dynamo room. The ship lurched and took a pronounced list to starboard. Water poured in through the holes from the torpedoes as well as ventilators and portholes, the lowest of which were only a few feet from the waterline. Most men were asleep below decks, or were at their stations or in the battery or mess decks. About half the vertical doors were closed as a routine precaution. Many of these jammed from the explosions and subsequent list and a large number of men became trapped below.

Shortly after the initial explosions, it appears that parts of one of the magazines ignited, sending sheets of flames through the ship. Many were killed; others were severely burned. Seaman Baker, awakened by the second explosion, was seeking a way out through the starboard side of the marines' mess deck when the fire from the secondary explosions swept through the ship:

Prien interviewed in Berlin on 18 October. Part of the legend is the ambiguity between what the ‘Bull of Scapa Flow’ really believed he had done, what he chose to add for unclear reasons and what he was instructed to say by the intelligence and propaganda units. (Author’s collection)

The deck in front seemed to lift up, there was a flash and I felt myself lifted and crashed against the bulkhead. For a brief second I was enveloped in a sheet of flame. Someone half dragged half pulled me across the messdeck. He had escaped the flames. As I looked, I saw the skin had been burned from my hands, arms and back. I was clad only in a shirt and most of this had been burned away. The mess tables, stools and hammocks were blazing. Another explosion and the dynamo door blew across the deck to the bulkhead on the far side. One marine catching the full blast was hurtled to be smashed to pieces against the deck head. Others tried to make the last desperate struggle to get out of hammocks but overcome by smoke and flames dropped back exhausted. Everyone was giving a helping hand where needed. Some were beyond help, just charred bodies lying on the hot deck.[34]

All lights went out, complicating the escape efforts and making it impossible to issue orders over the tannoy system. It also shut down the radios, which had just been turned on, preparing to call for help.[35] For all practical purposes, it was impossible to do anything effective to save the ship. Captain Benn had gone below decks in the foreship to find out what had happened during the first explosion and by the time he managed to get out on the forecastle, his ship was about to capsize. Commander Nichols continued his account:

Then, just thirteen minutes after the first explosion came three more sickening, shattering thuds abaft us on the starboard side. Each explosion rocked the ship alarmingly, all lights went out and she at once took a list [to starboard] of about twenty-five degrees. There was no doubt in my mind what had happened this time, nor what was going to happen. How on earth had a submarine got through the defences? In addition to the heavy damage done by the torpedoes there were a large number of portholes open, fitted with 'light-excluding ventilators'. I knew every one of these on the starboard side must be submerged and it would be impossible to close them against the incoming rush of water. There was no electric power to work the derrick to hoist out any of the larger boats and, because of the ever-increasing list, many of the smaller boats could not be lowered. Just minutes after the second salvo of three torpedoes had struck her, the *Royal Oak* sank. In the short struggle that followed, I recall only a frantic rush and scramble up the ship's side as she spun round in the act of sinking and, when she sank under me, how cold the water was on my feet as my short seaboots fell off. Then, in the darkness, an intense feeling of loneliness seized me and I remember little else until I found myself sharing a raft with several others – all of us soaked in a foul-smelling, slippery, chilly mixture of sea water and oil fuel.[36]

Royal Oak capsized and sank at about 01:29, thirteen minutes after being hit. On the port side of the battleship, sheltered from the explosion, the civilian drifter *Daisy II*, acting as a supply and shuttle boat, had been moored for the night. When *Royal Oak* started to list, *Daisy II* was cut loose and contributed to the rescue of 386 survivors, many wounded or badly burned.[37] For about an hour, it appears that the only other boats picking up survivors were boats sent from *Pegasus*. Eventually, though, a few other vessels came from the Scapa pier and Lyness. A few men swam ashore or across the 700–900 gruelling yards to *Pegasus*.

Seaman Baker had moved around in the darkness below decks with a small group of men without finding a way out, and had almost given up, when a jammed door was finally opened a few inches by the help of somebody from the outside with sledgehammers:

> we managed to squeeze through to queue-up at the floor of a ladder leading to the upper deck. Reaching the upper deck, everything seemed to be all chaos and confusion. Someone was giving the order 'abandon ship'. […] A loud explosion and 'Y'-turret, weighing a good ninety tons seemed to be lifted into the air as if by a giant's hand. It came down on one side with a gaping hole torn in the armour. The six-inch battery was hurled like matchsticks into the sea while dull thuds told of men diving from the bridge, only to hit the ship's side. […] Another violent lurch and the ship started to sink with a rapidity that was startling, [so] I took a header into the icy water. […] Knowing it would be really hopeless to reach land, I decided to wait to be picked up. A trawler, her siren mourning dismally, seemed to be very close at hand while a searchlight lit up the icy waters.[38]

Baker was one of the lucky ones. When the huge mass of steel heeled over he was in the water, seeing men running on the bottom or climbing over the blister. He was eventually dragged on board *Daisy II*, but by then he had seen many succumbing to exhaustion around him, frozen by the icy water or suffocated by thick, black oil. Of the around 1,250 men on board the *Royal Oak* that night, 833 lost their lives, among them Rear Admiral Henry Blagrove, the C-in-C 2nd Battle Squadron. Some 424 officers and men were rescued, the majority of them by *Daisy II*. Many were badly burned.[39]

On shore and on board the other ships in Scapa Bay there was a great deal of confusion. Nobody seemed to know what was going on. Many registered nothing and slept on. Some searchlights were turned on, but, as few even considered a submarine attack, the beams were trained on the empty skies, looking for non-existent German aircraft, rather than into the bay. Only at 05:04 did the first indication of what had really happened begin to emerge through a signal from ACOS to the Admiralty: 'Report from Captain Benn. He believes *Royal Oak* torpedoed.'

U47 took the opportunity to make good her escape. Prien believed the commotion was a deliberate search for his boat but this was not the case and his escape was to be much easier than he feared. At one stage, the men on the bridge of *U47* had the impression they were being chased by a British destroyer, becoming deeply worried they were not going to reach the breakout route in time. The 'destroyer', no more than a boom vessel or fishing boat, turned away, and *U47* was left alone in the darkness of Kirk Sound. In fact, the first destroyer to slip anchor and start searching for a submarine inside the anchorage, *Mashona*, did not do so until 03:03, by which time *U47* was in open waters.[40]

Even so, Obersteuermann Spahr struggled to steer the boat through the maze of the sunken blockships. The increasing tide made the northern channel no longer viable and Prien headed for the southern channel, between the wreck of *Minieh* and Lamb Holm Island, taking on a current in excess of 10 knots. He later noted:

> I have to get through the narrows on the southern side where the water is deep enough. Things are difficult with eddying swirls. Course 058º and 10 knots. We are hardly making ground and with 'full ahead' struggle past the southern blockship. The helmsman does a sterling job. We finally get free of the blockship by alternating between full ahead, ¾ speed and emergency speed – only to see a mole ahead! With some hefty manoeuvring we round this too and finally we are out at 02:15.[41]

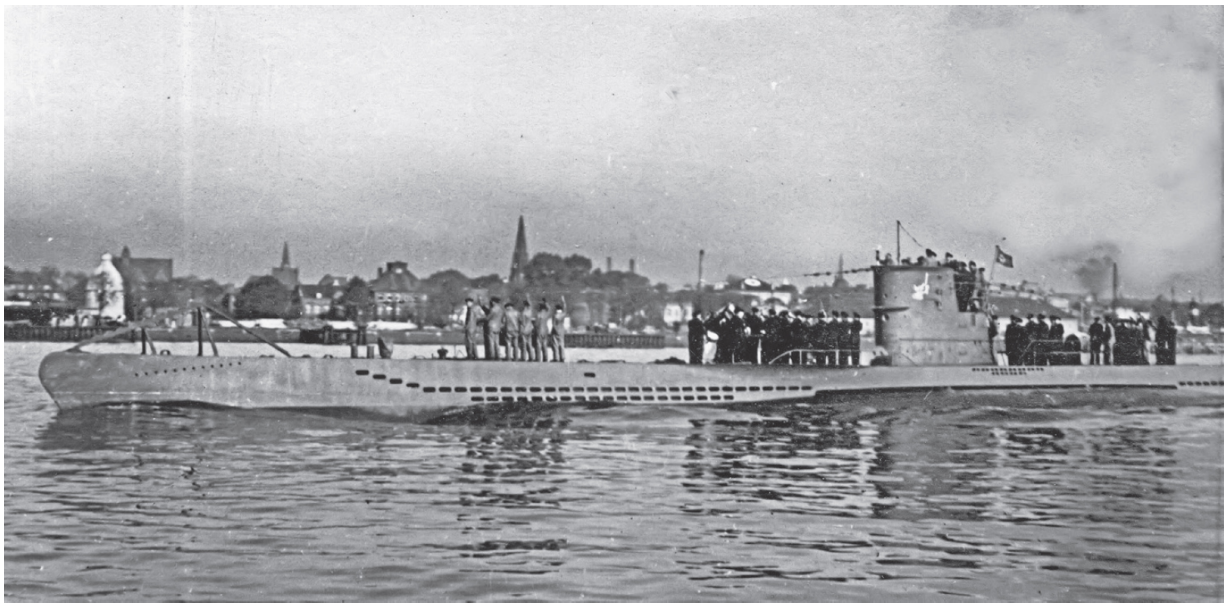
Back in open waters, Prien ordered a south-easterly course into the North Sea. Action stations were stood down and a shot of rum issued to

everyone. They had done the impossible: entered Scapa Flow, created havoc and got away without being detected.

Royal Oak *Sunk*

U47's journey back to Wilhelmshaven was almost as uneventful as had been the way out. Surfacing at dusk on the 14th, course was set towards Germany and a little later a signal was sent to Admiral Dönitz. According to Dönitz's war diary, the signal read: 'Operation carried out as planned. *Royal Oak* sunk, *Repulse* damaged', but this wording has never been confirmed and may be a manipulation of sorts in the admiral's account, with the names added by himself.[42] When interviewed by foreign journalists on 18 October, Prien held that he had seen and attacked 'two large ships'. Although merging into the background of the hills surrounding the anchorage, each had a lantern fore and aft and he was quite certain that one was *Repulse*, as she and *Renown* were 'the only ships of this type with two funnels'. *Repulse* was partly screened by *Royal Oak*, except for her bow and two gun turrets, at which he was aiming.[43] It is difficult to believe that Prien deliberately invented this, so either he really believed he had done as he said, or it was an intentional ruse by German intelligence.

First Officer Endrass thought it appropriate, during one of the night-time surface periods, to organise the painting of a 'snorting bull' on the conning tower. Prien quietly endorsed it and was later to become known as 'Der *Stier von Scapa Flow*' – 'The Bull of Scapa Flow'.



U47 returning to Wilhelmshaven on 17 October. Every warship in the harbour greeted them, and hundreds of workers, sailors and press lined the quay sides. (Author’s collection)

On the 15th, during daytime, several depth-charges were heard in the far distance. These had no relevance to *U47*, but were interpreted by Prien to mean a hunt was on for him, and he remained on the bottom for the day. When he surfaced in the evening, in the North Sea, the Norwegian vessel *Meteor* was sighted. The W/T office reported that she was transmitting on her radio, and Prien, who believed a hunt for *U47* was on, fired a shot across her bow to stop her. The steamer was found to carry more than 200 passengers for Newcastle and, shortly after, the U-boat's radio operator informed that the first report of radio signals being sent had been erroneous. The Norwegian vessel was allowed to proceed and *U47* continued across the North Sea.

Two days later, in the late morning of 17 October, *U47* entered the inner port of Wilhelmshaven to a well-orchestrated hero's reception, with Dönitz himself standing proudly ahead of the guard of honour. Every member of the crew received an Iron Cross on the spot and, the next day, Prien and the crew were flown to Berlin, where they were paraded through the streets and cheered by a large crowd. Later, they were welcomed by Hitler at the Chancellery, where Prien received the *Ritterkreuz* (Knight's Cross) – the first such of the war to be awarded to the Kriegsmarine. After another day of celebrations in Berlin, including something as unusual as a press conference, the crew returned to their boat on the 20th, whereupon *U47* was taken through the canal to Kiel, arriving there in the afternoon of 21 October.

The crew of *U47* receiving the Iron Cross from Prien after their return to Wilhelmshaven on 17 October. Behind Prien stands second officer Oberleutnant Amelung von Varendorff. The row in front of Prien is, from left to right, Engineering Officer Hans Wessels, first officer Oberleutnant Engelbert Endrass, Obersteuermann Wilhelm Spahr, Obermaschinist Kurt Römer, Stabsobermaschinist Otto Strunk, Stabsmaschinist Gustav Böhm and Bootsmann Hans Sammann. (Author's collection)

The book *Mein Weg nach Scapa Flow*, allegedly written by Prien himself, but in reality the product of a ghost-writer, was quickly issued to celebrate the victory and draw resources and recruits to the navy. Unfortunately, the story was so twisted that it backfired on Prien, casting doubts on his achievement to the extent that British sources at times questioned that he had actually been inside Scapa Flow, ascribing the sinking of *Royal Oak* to an aerial mine. The achievements of Prien and his crew are beyond question, however. Parts of one torpedo were recovered by naval divers near the wreck after the war, and as late as September 2002, one of the missing torpedoes resurfaced, drifting towards the Norwegian tanker *Petrotrym* at anchor in the bay. The warhead was no longer attached, but due to the potentially dangerous amounts of compressed air still inside, the remnants were towed away and disposed of by a naval bomb disposal team.[44]

Royal Oak was one of three capital ships lost by the Royal Navy to the Kriegsmarine during WWII.[45] Following closely on the sinking of the *Courageous*, there is no doubt that it shocked Churchill and the Admiralty, who must have realised that, but for the luck of the Home Fleet being out that night, the damage to the British superiority in the North Atlantic could have been serious. To find out what had happened, a Board of Inquiry was appointed, led by Admiral Drax.[46] After extensive interviews with survivors and relevant people on shore and from other boats, the board issued two reports: one on the entry of a German U-boat into Scapa Flow, the other on the sinking of *Royal Oak*. The reports concluded that, although there was no evidence that a U-boat had actually been inside the anchorage, the board was ‘definitely of the opinion that HMS *Royal Oak* was sunk by torpedoes fired from a submarine’ and several measures to improve the defence of Scapa Flow were suggested.[47]

18 October 1939, in Berlin. Prien and Wessels savouring the moment. They were driven through the streets of Berlin with tens of thousands of people cheering them. (Author’s collection)

Every member of *U47*'s crew was made special on this day, 18 October, in Berlin. Here, a group of BDM-girls are giving their tribute. (Author's collection)

Determined such an attack should never happen again, large resources were invested at Scapa Flow. Within a week, the blockship *Lake Neuchatel* was scuttled south of the *Thames* and, shortly after, more ships were put in place, sealing off Kirk Sound completely. Later, the other potential entries to the anchorage were closed in a similar way, adding searchlights, patrol boats, mines, nets and detector loops at exposed places.

Royal Oak still rests at the bottom of Scapa Flow as a war grave, marked by a simple buoy, and 14 October is commemorated every year by an official ceremony at the location. Prien and *U47*, with many of the men who were with him at Scapa Flow, were lost off Rockall around 7 March 1941.[48]

On 31 October, Churchill, Pound and Deputy Chief of the Air Staff, Air Vice Marshal Richard Peirse, arrived at Scapa Flow to discuss the future of the anchorage and its protection against aircraft and U-boats. Loch Ewe was unsatisfactory as an anchorage for the capital ships, and the Admiralty suggested making the Clyde the main fleet base. Forbes argued strongly against this. A full day would be lost in sailing around Scotland and into the northern North Sea compared to Rosyth, which was his choice. Air Vice Marshal Peirse supported the two lords as the Clyde would be considerably easier to defend against air attack – not least as the fighters would have more time to scramble and reach interception height as warning time of an attack would be significantly longer. Churchill advised working in two shifts, one part of the fleet at sea and one in harbour. Grudgingly, Forbes agreed to move to the Clyde, provided he would have a further five destroyer flotillas at his disposal and permission to lay a deep anti-U-boat minefield outside the net at Clyde. Churchill nodded to both, and Scapa Flow was abandoned while the air defences were strengthened and access through the sounds closed. It would be March 1940 before the Home Fleet was back at its main anchorage.[49]

The Bull of Scapa Flow: Prien prepares to take *U47* on another patrol from the Germania yard in Kiel. The Snorting Bull emblem was adapted by First Officer Endrass from a drawing in a magazine that the crew had on board during the patrol. Later, it was used by several boats of the 7th U-boat Flotilla. The civilians are presumably press. (Author's collection)

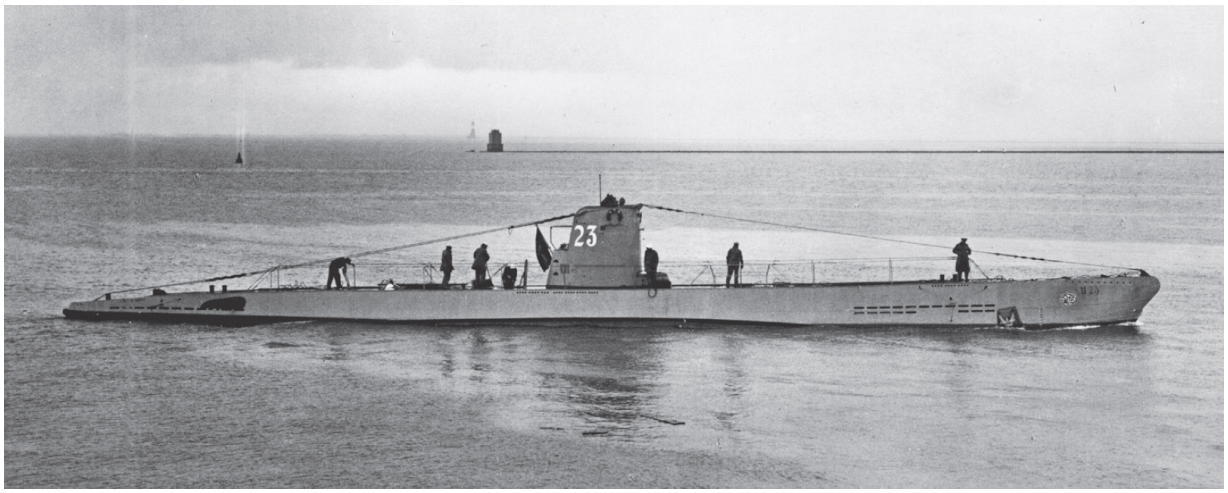
— 14 —

Pale Death[1]

Ships are our Prey

SEVERAL PERSONALITIES EMERGED AMONG the German U-boat commanders during the first months of the war. It is notable that all ten of the most successful U-boat commanders of the war served during the initial phase from September 1939 to April 1940, either as captains or IWOs.[2]

On 4 October 1939, Kapitänleutnant Otto Kretschmer, Kommandant of the Type II boat *U23*, sent the small British freighter *Glen Farg* to the bottom, east of the Orkneys. This was his third war patrol, but the first time his torpedoes found a target. En route from Norway to Scotland with pulp and ferro-chrome, the 876-ton British freighter was intercepted by a burst of machine-gun fire. Master Robert Hall stopped the engines, but his radio operator kept transmitting until a second, longer, burst against the bridge and superstructure made the crew scramble for the boats. Kretschmer allowed them to row away before he sent a single torpedo into *Glen Farg*. Hall and fifteen men were picked from the lifeboats by the destroyer *Firedrake* and landed at Kirkwall the next day. One man was lost.[3]



Type IIB boat *U23*. (Author's collection)

No further Allied ships were encountered and a few days later, *U23* was ordered away from the Orkneys to make way for *U47* to enter Scapa Flow. On his next patrol, lasting nine days in early November, Kretschmer laid mines in the inner Moray Firth, off Cromarty, but otherwise achieved nothing. On Kretschmer's last patrol of the year, his fifth war patrol, the 2,400-ton neutral Danish freighter *Scotia* was sunk in the North Sea in the evening of 7 December. She was one of four ships travelling together, but, unlike the others, she was darkened, which Kretschmer found suspicious and ample reason for a torpedo. The first 'eel' missed, but the second hit the forecastle. *Scotia* took nineteen of her crew with her and only two men were picked up by *Hafnia*, another of the ships in company.[4]

For the next couple of days, Kretschmer attempted to take *U23* into the Stronsay Firth and Kirkwall Bay in the north-western Orkneys, looking for prey among the many ships there waiting to be inspected for contraband. A combination of A/S patrols, bad weather and strong currents, twice threatening to throw the boat onto the skerries, forced him off. Giving up the Orkneys, Kretschmer headed north for Shetland, where conditions were somewhat better and he was able to enter Yell Sound in the northern part of the islands: 'Coming in along the western side of Yell Sound, two torpedoes were fired at 02:08 [on 12 December] at the North Holm which was taken for a large warship at anchor. Of these one exploded.'[5] These were his last torpedoes and a somewhat downcast Kretschmer had to tell his IWO Oberleutnant Adalbert Schnee to head for home. It stands to the credit of both officers that this less than successful attack is as meticulously reported in the war diary of *U23* as their many successes.[6]

Three days into his sixth war patrol, on 11 January, Kretschmer sank the 1,150-ton Norwegian *Fredville* east of the Orkneys (eleven dead, five survivors). This took four torpedoes, though; the first detonating early and the second going deep. Hence, when two large vessels were found at anchor in Inganess Bay near Kirkwall the following morning, *U23* had only one

torpedo left.[7] This was sent into the largest, the 10,500-ton Danish tanker *Danmark*.[8] The explosion broke her back and a fire broke out. The bow settled on the seabed, but she did not sink fully until 22 January. *Danmark* was one of the largest merchant ships sunk thus far in the war and a great success for Kretschmer, all the more so as he passed into the bay on surface through two patrol lines of auxiliaries under the cover of darkness. With no more torpedoes left, Kretschmer once again had to set course for home after less than a week at sea.

When taking over the brand-new *U99* in March 1940, Kretschmer had made eight war patrols as Kommandant of *U23* with a total of ninety-seven days at sea. Seven merchant ships had been sunk, amounting to some 25,000 tons, plus the destroyer *Daring* (see Chapter 9). Four of the merchant ships had been neutral, two Danish and two Norwegian.[9]

Unlike many of his colleagues, Kretschmer was quiet and reserved, almost withdrawn, yet he was to become the highest-scoring commander of the U-bootwaffe. Having lived for a year in England as a teenager, he spoke fluent English – a rare commodity among Germans at the time. Captain George Creasy, director of the Admiralty's A/S Warfare Division, interviewed him after his capture in March 1941 and later wrote: 'I saw a young and obviously self-confident naval commander who bore himself, in the difficult conditions of his captivity, with self-respect, modesty and courtesy. His record stamped him as brave and quick-witted; his appearance was that of a gentleman. When he left me I sincerely hoped there were not too many like him.'[10]

Fortunately for the British, not all the U-boat captains were like Kretschmer. When Kapitänleutnant Ernst-Günther Heinicke returned to Wilhelmshaven with *U53* on 29 November without having sunk anything, in spite of reporting numerous sightings, Dönitz was not satisfied. He interviewed Heinicke at length and, deciding he did not 'possess the proper aggressive spirit', had him transferred to the merchant raider *Widder*.[11]

Kapitänleutnant Otto Kretschmer.

Oberleutnant Adalbert Schnee, who completed five war patrols as Kretschmer's first officer before going on to win his own laurels. Both photos are taken later in the war as the two men are bearing the Knight's Cross with Oak Leaves, which Kretschmer received in November 1940 and Schnee in July 1942. (Author's collection)

A Large Blow of Air

During September, *U39* and *U27* were lost, both west of the Hebrides to the efforts of destroyers of the 6th Flotilla (see Chapter 11). Dönitz was naturally concerned by their loss, but also confused. British media reported numerous survivors from the U-boats being brought ashore as prisoners of war (POWs) and the BdU had problems understanding how anybody could survive the sinking of a U-boat at all. He concluded that they must either have been caught unawares on the surface through bad weather or damaged by return fire from a merchantman attacked on the surface. In both cases, the answer would, in Dönitz's opinion be to attack with torpedoes, submerged and without warning, and he renewed his requests to the SKL to lift the Prize Regulations.[12]

In the morning of 13 October, the Type IX boat *U42* intercepted *Stonepool* (Master Albert White), detached from convoy OB-17, south of Bantry Bay. The freighter, on its way from Barry to St Vincent loaded with 6,600 tons of coal and general cargo, was damaged by gunfire from the U-boat, but defiantly fired back, all the time sending an SSS signal. After ten minutes, Kapitänleutnant Rolf Dau found the return fire too accurate for comfort and decided to take his boat down. He did not wait for the gun crew to come back below and they were left floating in the water.

The radio operator of *Stonepool* continued to send emergency signals, and when Dau resurfaced to pick up his men, about ten minutes later, he ran straight into *Imogen* and *Ilex*. The two destroyers, originally in the area to pick up convoy HX-3 after leaving OB-17, had been ordered to search for *U48* following the attacks on *Emile Miguet, Heronspool* and *Louisiane* (see Chapter 12), but alerted by *Stonepool* that a U-boat was on the surface, they headed for the position given.[13] On the way, the wreck of *Emile Miguet* was sighted, but with no boats in the water and no sign of life on board. A dozen rounds were fired into the hulk to make sure she was sinking, before they

continued for *Stonepool*'s position. This time they found their U-boat. Lieutenant Ewing of *Imogen* wrote:

At 10:16 *Ilex*, then 3 miles on our port bow hoisted 'One submarine in sight bearing 195º, distance 7 miles' and opened fire. *Ilex* then made, after we had sighted 3 boats and began to think maybe she had mistaken these for a submarine 'S/M dived near boats' At last we felt that we had a good chance of success. Having visual proof that a U-boat was in the vicinity and only a very small time interval for it to move off in. We reduced to operating speed and both *Ilex* and ourselves got contacts but never together or for long enough to classify as 'submarine'. We searched for two hours getting more and more despondent and at last we gave up at 12:20. *Ilex* was ordered to continue the sweep while we closed the boats. It is impossible to say definitely why we failed to get this U-boat but the contributing factors are – it is fatal for the destroyers to get separated – we must sweep up to the position together in line abreast even if this means that the one ahead must wait for the one astern to catch up even though time is an essential factor. [Otherwise, the first destroyer arriving] darts about laying wakes all over the place.[14]

Imogen and *Ilex* gave up the search and, after picking up the crew from *Louisiane* who were in their boats nearby, fell in with *Stonepool*, escorting her back to Barry docks at a leisurely 9 knots.[15] The day was not over, though:

At [18:38], *Ilex* suddenly altered course to port and increased speed and made to us by light 'Submarine this way'. It seemed an odd way of putting it at the time but what had happened was that *Stonepool*'s masthead lookout, being higher than any of our lookouts, had sighted something which looked to him like a submarine and they had some experience by now. We followed at once and almost immediately *Ilex* hoisted the *Submarine-in-Sight-Flag* and opened fire. The U-boat was slow in diving but could be seen venting her tanks. Before she disappeared we got a range of 11,000 yards. At 6.57 p.m. we told *Ilex* to reduce speed and start operating so that she did not over run the position, hoping to prevent a repetition of this morning's mistakes.[16]

At 19:18, *Ilex* was ahead of the U-boat while *Imogen* gained Asdic contact. Unwearyingly, Commander Stevens maintained the contact and guided *Ilex* over the hapless U-boat. Lieutenant Commander Saumarez dropped a pattern of five depth-charges at 19:28, and three minutes later the U-boat came to surface in the midst of a surge some 750 yards away from *Imogen*. She seemed to be in good trim and appeared unharmed. Both

destroyers opened fire with their 4.7-inch guns. Two or three shells hit, one taking the deck gun away. *U42* was doomed:

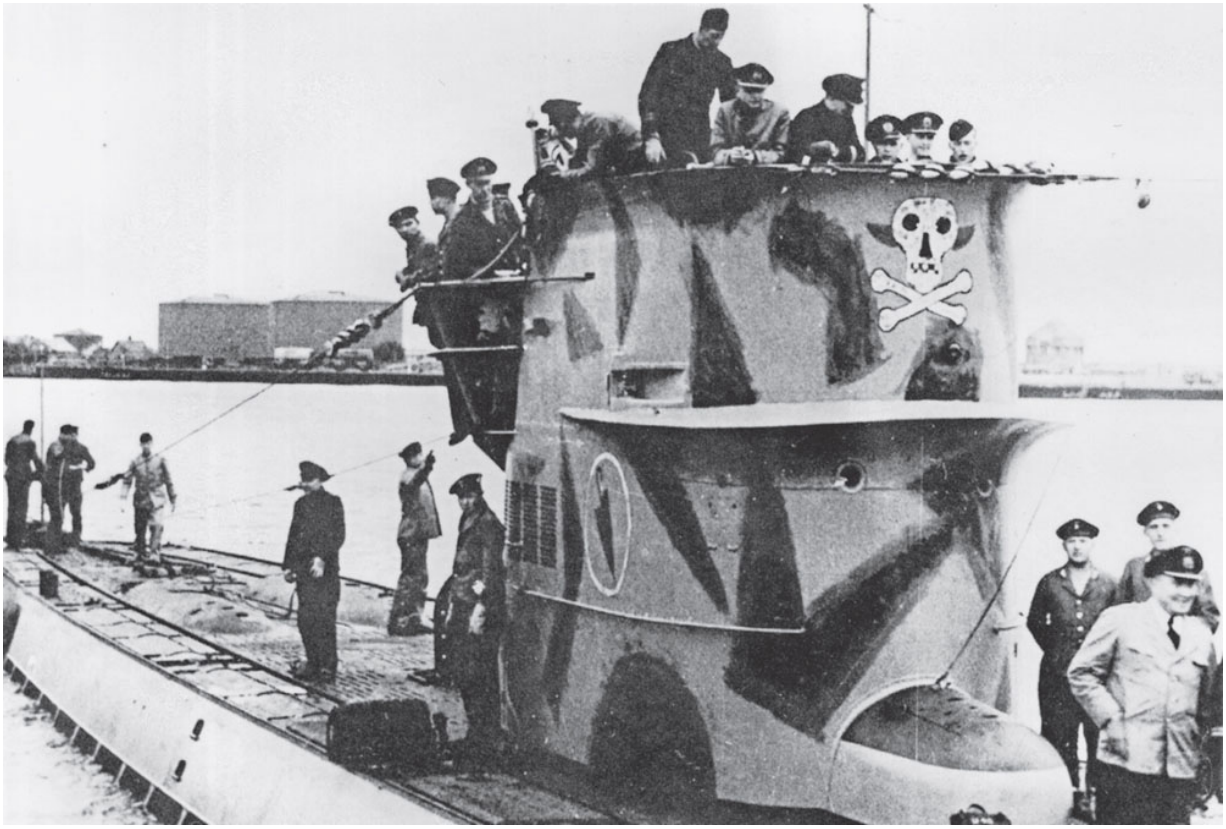
> *Ilex* who was bows on went 'Full Ahead' to ram, aiming to hit the motor-room which is the largest compartment in the boat and just abaft the conning tower. Just before she got there, she stopped engines and went 'Full Astern' to reduce the impact and so the damage to herself. She eventually hit with about six knots, or so the Captain estimated. As she passed over, their Torpedo Gunner's Mate fired the starboard depth-charge thrower. Almost as soon as *Ilex*'s stern had drawn clear, the conning tower opened and an officer appeared waving a piece of white paper, then some sailors with their hands up.[17]

Ceasing fire, but keeping the guns trained on the U-boat, *Imogen* closed and lowered a whaler. Fifteen men were picked up, including Dau, while a further two were taken out of the water by *Ilex;* twenty-six men perished. *U42* sank within half a minute of being rammed. *Stonepool* limped into Barry docks on the 16th to a well-earned signal of praise from C-in-C Western Approaches.[18]

In the morning of 14 October, the destroyers *Inglefield, Ivanhoe* and *Intrepid* were operating south-west of Ireland when a distress message was received from the Royal Mail Liner *Lochavon*. She was part of convoy KJF-3 which had been without escort since losing contact with the French submarine *Surcouf* the day before due to poor weather. Several U-boats had been vectored towards the convoy by the German B-Dienst, which had alerted Dönitz to its whereabouts. Kapitänleutnant Alexander Gelhaar in *U45* was the first and, as it turned out, the only one to find the convoy. Firing a spread of torpedoes at first light, he hit and sank *Lochavon*, which resulted in the dispersal of the rest of the ships.[19]

Destroyer *Ilex*, August 1937. Note the Spanish Civil War markings on B turret. (W&L)

Next to go was the French passenger liner *Bretagne*, and as soon as she had been hit and was sinking, Gelhaar set his sights on the cargo passenger-liner *Karamea*. Captain E T Graystone, an officer of the RNR, was not ready to be sunk, though, and zigzagged away at 15 knots, skilfully avoiding the shells from *U45*. The chase lasted for several hours, *U45* firing more than thirty rounds. All the while, *Karamea*'s radio operator sent SSS signals. The operators onboard *Inglefield* were able to tune in very accurately to these signals with their D/F antennae, providing Captain Talbot of *Inglefield* with updated bearings as the destroyers raced towards the scene. At 10:02, *Karamea* was sighted ahead and a few minutes later the U-boat was also spotted, diving within a few minutes. The destroyers spread out a mile and a half apart and, slowing when 3 miles from the position where the U-boat had dived, an Asdic sweep commenced. To their disappointment, no contact was gained at first. Single depth-charges were fired at intervals while the swept area was gradually enlarged. Finally, at 13:20 *Inglefield* obtained contact and together with *Icarus*, which had joined her consorts coming out from Plymouth, the destroyers commenced a systematic series of depth-charge attacks. Captain Talbot wrote: 'After one attack a large blow of air was seen in the position of the attack and […] oil, pieces of wood painted grey and one orange came to the surface. The depth of water was about 900 fathoms. After the last attack contact was never regained.'[20] The search was continued until nightfall, but *U45* had been sunk. There were no survivors.



Type IX boat *U40* under Kapitänleutnant Werner von Schmidt returning to Wilhelmshaven after her first patrol, on 18 September 1939. On her second patrol, by which time Kapitänleutnant Wolfgang Barten had taken command, *U40* was lost to mines in the English Channel. There were only three survivors. (Author's collection. This photo is a post-war print)

U12, U40 and *U16* were also lost in October 1939. The former two both strayed into the Dover barrage minefields, while *U16* was sunk near Dover by British A/S trawlers. These were losses Dönitz could ill afford and the Channel area was avoided after this.[21]

Has Been Lost

German intelligence had for some time registered that after Prien's entry to Scapa Flow in October, the anchorage was no longer used in the same manner by the Home Fleet. On 15 November, Dönitz noted in his war diary that the B-Dienst now had concluded that the Royal Navy's capital ships were using the Firth of Clyde as their main anchorage. Looking at the maps, he concluded that a direct attack on that base was not feasible due to its geography, but it should be possible to lay mines across the entry to the Firth, catching some of the British warships.[22] Hence, on 28 December, *U32* under the command of Kapitänleutnant Paul Büchel left Wilhelmshaven on a mine-laying mission in the Clyde.[23] Büchel was not a very experienced submariner. He had joined the German Navy in 1925 but only transferred to the U-boat division in 1937. *U32* was his first submarine and he had been on board as commander since completing the transfer training in late August 1937. Since the outbreak of the war, Büchel and his boat had only been on one war patrol, lasting twenty-six days in September. During this, the 4,863-ton British *Kensington Court* and the 875-ton Norwegian *Jern* had been sunk by gunfire and explosive charges, allowing the crew time to take to the lifeboats (see Chapter 11). Returning to Wilhelmshaven, *U32* spent the better part of two months in the yards until Dönitz ordered Büchel to take on board a load of eight of the new, powerful TMC mines and head for the Firth of Clyde. En route, the neutral, unescorted 959-ton Norwegian freighter *Luna* was torpedoed off Haugesund. She sank slowly enough for all the crew to take to the boats and no lives were lost.

Approaching the Clyde a few days later, Büchel observed strong patrols and indications of fixed listening stations. In spite of being only a few miles from the intended position for the mines, and not detected, Büchel decided it was too dangerous to proceed and turned around. In open sea, he radioed HQ and asked for permission to move to the alternative position instead of making another attempt another day. Reluctantly, Dönitz accepted this, but added that until he heard Büchel's own account, he was 'not convinced the task was really not possible'.[24]

Unknown to Büchel and Dönitz, *Hood* arrived in the Clyde on 5 January, just hours before *U32* started her approach. This made the British A/S forces extremely vigilant and Büchel lost the opportunity to change naval history and make an impact on the war beyond that of Prien at Scapa Flow. Instead, he returned to Wilhelmshaven on 22 January after twenty-six days at sea with little to show. Dönitz was unhappy with Büchel's decision to abandon his primary target and wrote in his KTB that the explanation had been 'unconvincing', adding that the mission had been 'too difficult for this Kommandant'. Büchel was mercilessly relieved of his command and placed in a staff position.[25] IWO Oberleutnant Hans Jenisch took over command of *U32*.

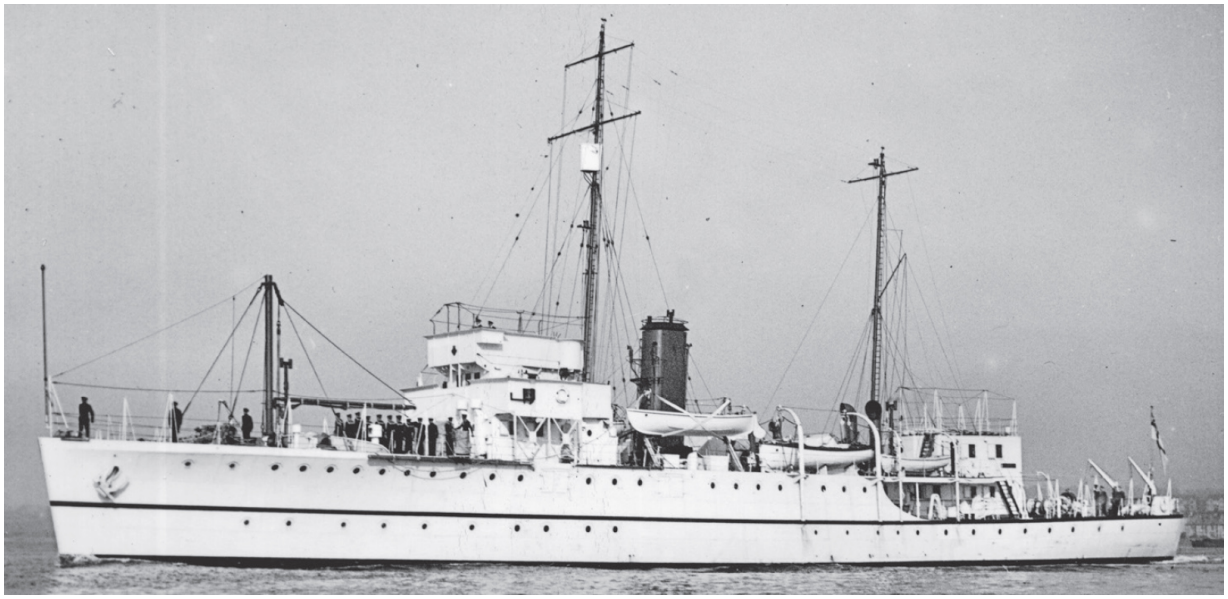
Dönitz had not given up on the Firth of Clyde, though. The feeling that Büchel had turned back too easily meant that another, more decisive captain could succeed. Kapitänleutnant Hans-Wilhelm von Dresky would be such a man. An experienced officer of 'Crew 29', he had served as watch officer on *U20* and had his own command of *U4* for a year before he took command of the larger *U33* in October 1938. On his first two war patrols, von Dresky had sunk eleven ships for 22,931 tons. To underline the seriousness of the mission, and no doubt the risk, Dönitz came to the dock in Wilhelmshaven in person to see von Dresky and his crew off on 5 February. At sea the next day, some minor leaks were discovered and *U33* had to dock at Heligoland for repairs before finally carrying on, delayed by

two days. After that, nothing was heard from *U33*. Not, that is, until intercepted British radio signals indicated a U-boat had been sunk in the Clyde. A few days later, Dönitz had to admit that it 'seems likely that *U33* has been lost'.[26]

In fact, von Dresky had entered the Clyde Estuary in the early hours of 12 February. The night was moonless with limited visibility and *U33* was on the surface when one of the lookouts reported a blacked-out vessel at anchor some distance away. It seems from the account of the survivors that von Dresky believed this to be a cruiser and would attack it on the way out, having laid the mines. It was not to be. Only minutes later, another shadow approached, heading straight for them, shining a searchlight irregularly ahead. The alarm was sounded and *U33* went down, continuing at periscope depth.[27]

The oncoming ship was the sloop *Gleaner*, patrolling south of Arran, on the 25-fathom contour between Ailsa Craig and Ship Rock Lighthouse in a triangular clockwise search pattern. For night patrol, only a listening watch was kept with hydrophones. Any effects picked up were, according to standing orders, to be investigated by Asdic. In addition, the Asdic was to be swept occasionally southwards.

At 02:50, Sub-Lieutenant Reade, who had the watch, was informed by the hydrophone operator Able Seaman Mellor that suspicious engine noises could be heard to the southwest, moving east. At first, nothing was found on the Asdic, but the hydrophone effects were clear and Reade altered course to port, ordered action stations, bringing the 4-inch gun and depth-charges to the ready, and called the captain.



Gleaner as a survey vessel before being converted to a mine-sweeping sloop in 1939. (Author's collection)

Lieutenant Commander Hugh Price arrived on the bridge taking over a few minutes later. When what looked like spray from a periscope was seen briefly in the glare of the searchlight, he increased speed and moved to attack. On the first pass over what was now firmly believed to be a U-boat, the operator aft could not calculate time to fire the depth-charges correctly due to a fault in the equipment and no charges were dropped. During a second pass, at 03:53, Price fired by remote control from the bridge. One of the chutes failed to release, but the other four charges exploded at 100–130 feet, near the seabed in this part of the Clyde. The fifth charge was dropped shortly after in a third attack.

Reloading of the depth-charges was found to be very difficult as the small ship was rolling heavily from frequent helm movements at high speed and only at 04:40 was *Gleaner* ready to attack again. This time all five charges went overboard as they should and detonated with devastating effect in the shallow water.[28]

Onboard *U33*, chaos reigned. The main lights were out and the emergency lights gave the boat an eerie atmosphere. One of the motors had stopped, instruments were failing and water trickled in from several leaks. Von Dresky put the boat on the seabed at 180 feet and his men started to repair the damage. The damage was worse than at first believed, though, and after the second major depth-charge attack, it appears that von Dresky found the only option he had was to surface and try to run for it. If this failed, he would have to scuttle, trying to save as many of the crew as possible. The rotors of the Enigma cypher machine were distributed to the men in the control room, with strict orders to throw them into the sea should escape be impossible. Orders were then given to blow the tanks and surface.[29]

At 05:22, the U-boat was caught on the surface in the glare from *Gleaner*'s signalling projectors.[30] Five shots were fired from the 4-inch gun while Lieutenant Commander Price turned his sloop to ram. By now, the

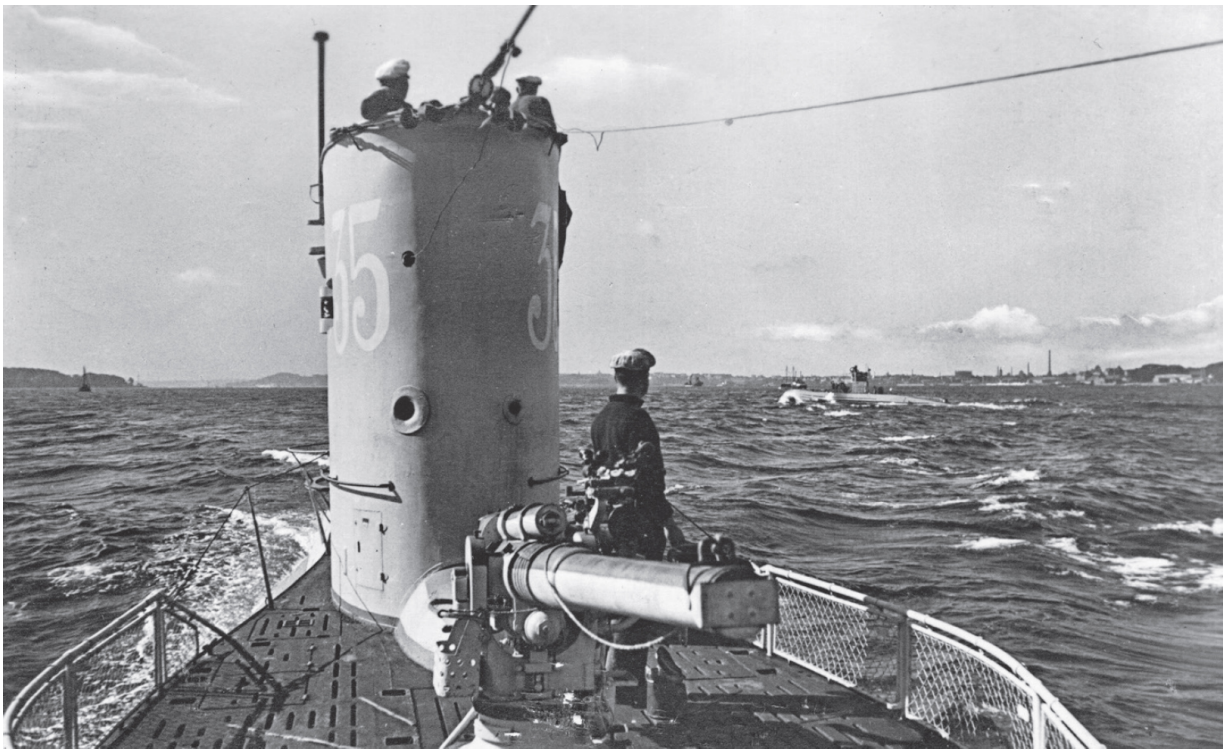
German crew emerged on deck, holding up their hands. Revised orders put the wheel to hard-a-starboard and the engines in full reverse, with *Gleaner* stopping smartly, parallel to *U33* some 160 yards away. Von Dresky decided escape was not possible and gave the orders to scuttle. Within a few minutes, a shower of sparks was seen coming from the conning tower, after which the boat started to sink fast, bow first. The crew tumbled into the icy sea. Boats were lowered, but the sea was rough and only seventeen men were picked up alive. Von Dresky was not among them; he and twenty-five others succumbed. The destroyer *Kingston* and two trawlers arriving on the scene retrieved mostly dead or dying German sailors.

Stabsobermaschinist Friedrich Kumpf had been given three Enigma rotors to get rid of. By the time he was pulled out of the water, he was so beyond himself from exhaustion and exposure that he had no thoughts for the rotors. All three were found in his pockets, including two used exclusively by the navy, and a search for the rest was initiated. A few days later, the minesweeper *Tedworth* was moored over the wreck, its divers searching the debris. Several more Enigma rotors were recovered, together with other vital equipment from the boat, subsequently forwarded to GC&CS at Bletchley Park. The bodies encountered were left undisturbed.[31]

The inner area of the Firth of Clyde would never be breached by Dönitz's U-boats. Defence booms, guard vessels and Asdic loops presented an impenetrable barrier and there would not be another success like that of Prien at Scapa Flow.

At dawn on 29 November, Kapitänleutnant Werner Lott had *U35* on the surface east of Shetland when he was sighted by *Icarus*. Lieutenant Commander Colin Maud turned for the U-boat, increasing speed. Lott crash-dived and went deep. His lookouts had seen the British destroyer at a distance and, at first, he believed he had got away. Not so. The Asdic of *Icarus* was out of order and a couple of depth-charges were dropped at random. There were other destroyers in the area, though, and Maud called

for assistance. *Kingston* and *Kashmir* came to support. Approaching the position indicated by *Icarus, Kingston* took station on the port beam of *Kashmir* and a search was initiated. *Kingston* soon obtained a contact, as did *Kashmir* shortly after. *Kingston* attacked, dropping three depth-charges without visible result. Unknown to the destroyers, the depth-charges had damaged the boat severely. The hydroplanes had been put out of action and the periscope was leaking.



Type VIIA boat *U35*. (Author's collection)

Kashmir experienced ‘considerable difficulty’ in maintaining contact due to eddies set up by the exploding charges as well as a temperamental Asdic set. While the Asdic was attended to, *Kingston* turned, making a second attack on the U-boat. This attack put out all the lights in the boat, leaks developed aft, and the hydroplanes were jammed in the ‘hard-up’ position. Lott ordered full speed ahead to try to regain control, but the boat could not be held and kept rising. Attempts to flood the ballast tanks failed as the main vent had been jammed by the explosions. At 11:58, *U35* surfaced some 400 yards ahead of *Kashmir*. While still making headway, the crew started to appear on deck, some of them manning the gun. Commander King ordered one shot to be fired across the bow of the boat, which by now was almost lying still in the water. This had the surprising result that the German sailors abandoned their gun, holding up their hands in surrender, while others started jumping into the water. No depth-charges had been dropped by *Kashmir*.

Kashmir hove to and picked up four officers and twenty-seven ratings while *Kingston* continued to circle the scene, with Asdic continuously sweeping. Later, the two destroyers switched roles, *Kingston* closing the now-sinking boat, rescuing the remaining survivors. The U-boat was obviously sinking and it was not possible to send anybody on board for a search. *U35* went down twenty minutes after she had surfaced. Kapitänleutnant Lott’s lifebelt was damaged and he almost succumbed to the cold water. On board *Kingston*, he was given a hot bath and a shot of whisky and recovered quickly. [32]

The last U-boat lost in 1939 was *U36* (Korvettenkapitän Wilhelm Fröhlich), which went down with all hands in the Skagerrak, south-west of Kristiansand, on 4 December after having been hit by a torpedo from the British submarine *Salmon*.

Contact Obtained

British aircraft were not much of a risk for the U-boats during the first months of the war, but one occasion heralded things to come.

Just before midday on 30 January, Flying Officer Edward Brooks of 228 Squadron was called to the operations room at Pembroke dock and instructed to take his Sunderland to sea, searching for a U-boat reported near the Scillies. Brooks took off and, arriving at the given position in the early afternoon, contact was made with the destroyer *Whitshed* and the sloop *Fowey*, also searching for the U-boat.

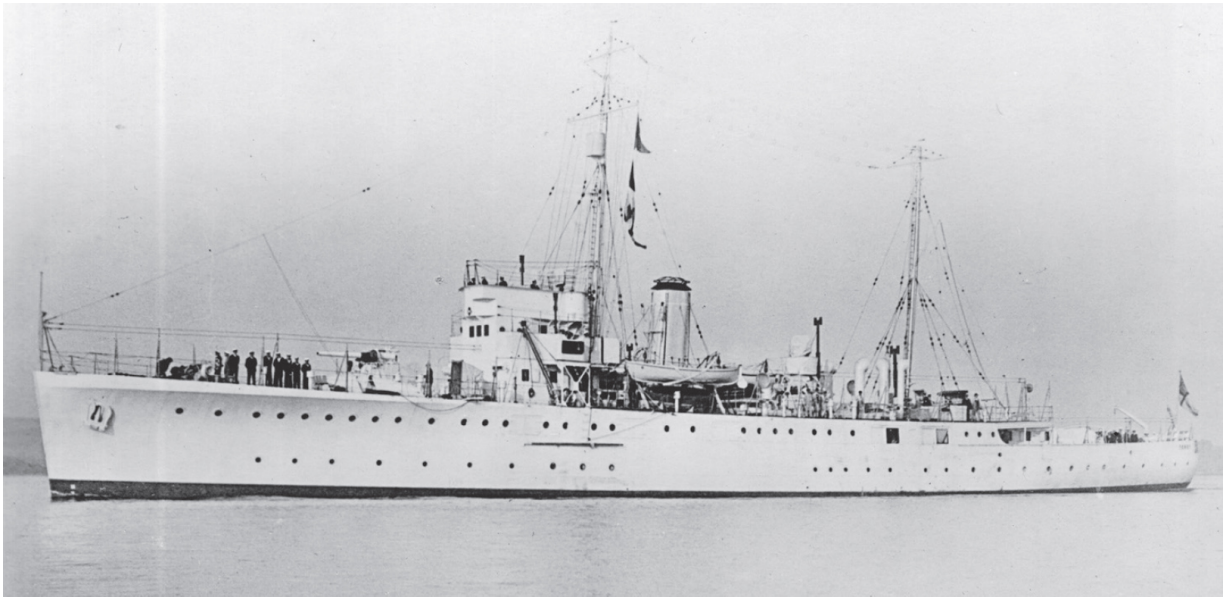
It had been a rough night and morning for Commander Henry Ellison of *Fowey*. His part of convoy OB-80G had been battling strong winds and heavy seas and at dawn three ships were missing. The remaining six were herded into two columns, continuing at 6 knots. At 10:20, fog patches were encountered and zigzagging was stopped in order not to lose more vessels. At 11:05, a torpedo hit the 5,085-ton Greek *Keramiai*, third and rear ship of the starboard column. Ellison ordered 'full ahead' and altered course to starboard, taking *Fowey* towards the anticipated position of the U-boat:

> Contact was obtained at a range of about 1,100 yards at 11:18 on the port bow, moving left. While endeavouring to bring this fine on starboard bow, contact was lost. At 11:20, a periscope was sighted broad on starboard bow, contact was regained and course altered to attack. Periscope then dipped. At 11:21, periscope was again sighted approximately 300 yards almost directly ahead of the ship. A full pattern of five charges was fired at 11:22 with settings 500 feet on the three dropped from chutes and 350 feet on two fired from throwers. […] On the second appearance of the periscope, it remained in full view for about 25 seconds at least and only dipped about 150 yards ahead. Depth settings on charges were therefore too great, but there was insufficient time to alter the settings and the position of the submarine was known so definitely that it was considered advisable to fire the pattern. I am of the opinion that the U-boat was unaware of *Fowey*'s presence until just before the attack and that he was inspecting the torpedoed ship at the time.[33]

Fowey briefly regained contact, but lost it again before the throwers and chutes could be reloaded. Unknown to the British, the U-boat, which was *U55* under the command of Kapitänleutnant Werner Heidel, had been seriously damaged and was struggling for survival. The cover of the port

diesel exhaust valve had been ruptured and water was pouring into the boat in alarming amounts.

On surface, one of the missing ships, *British Unity*, was sighted from *Fowey* in the mist and instructed to pick up the survivors from *Keramiai* before rejoining the convoy while the sloop continued the hunt. Depth-charges were dropped on several uncertain contacts, but it appeared that the U-boat had managed to escape. In fact, *U55* was on the bottom at an unbelievable 770 feet, just lying still.[34] At about 13:45, destroyers *Whitshed, Ardent* and the French *Valmy* appeared. The two British ships were sent on a search to the north-west while *Valmy* was ordered to find the convoy and take care of it. *Fowey* remained in the area of the original contacts. Around this time, Flying Officer Brooks arrived in his Sunderland, making himself known to Commander Edward Conder on the bridge of *Whitshed*. Through signalling, he was instructed to conduct a gradually widening search for the U-boat, to the north of *Fowey* and east of *Whitshed* and *Ardent*.



Patrol sloop *Fowey*. (Abrahams)

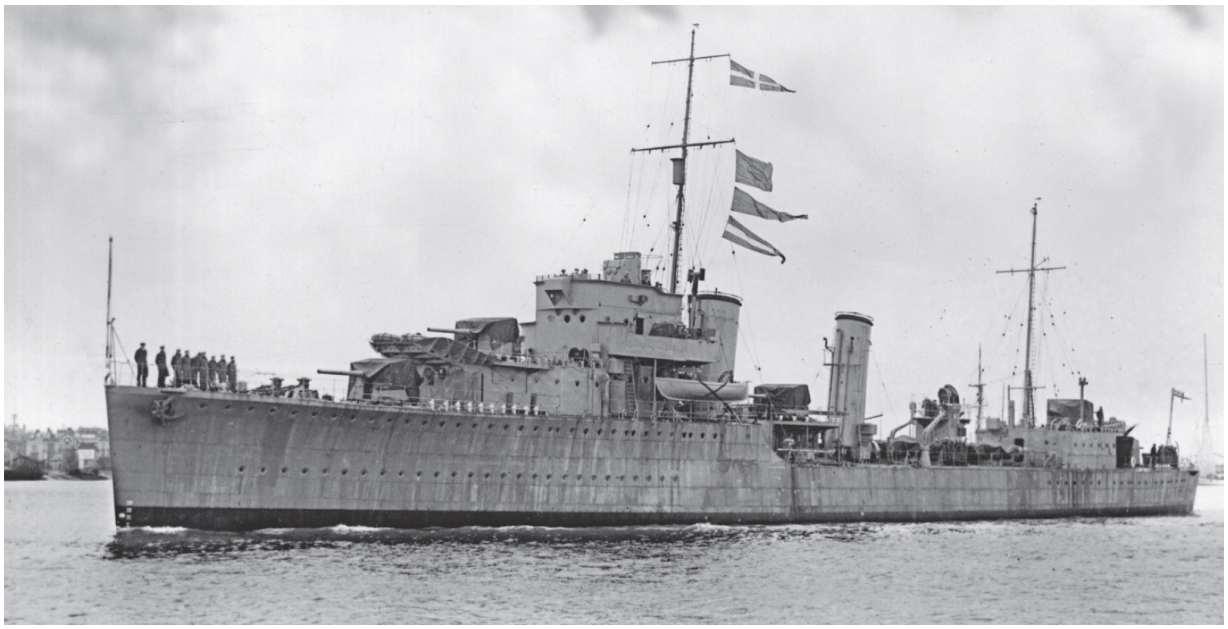
Half an hour later, *U55* was sighted by Brooks on the surface with several of the crew assembled on deck. The leaks could not be contained and Heidel had decided to surface while it was still possible. Brooks took his flying boat down to 650 feet, dropping a single bomb which fell some 5 yards to starboard of the submarine. Circling the U-boat, more men were seen emerging from its open hatches. After a while, fire was opened on the Sunderland, and Brooks, not prepared to take any risks with his crew, left the scene to call the destroyers. Actually, *U55* had already been sighted from *Fowey*. Commander Ellison turned in its direction and opened fire from the forward gun at a range of about 4,300 yards. *Valmy* was still in the area and opened fire too, but turned away from the U-boat to open for all her guns and vanished into the mist.[35] *Whitshed* was seen on the horizon and *Fowey* attempted to recall her, but she did not read the signal. The gunfire was heard, though, and she eventually returned of her own accord.

Returning over the U-boat a short while later, Brooks saw an explosion at her stern. It is unclear if this was a shell from *Fowey* or scuttling charges. By the time *Fowey* and *Whitshed* arrived on the scene, *U55* had sunk and all that was left to do was to pick up the survivors from the water. Heidel chose to remain on board and go down with his boat while the crew faced five years as POWs. From interrogations of the survivors, it was clear that *Fowey*'s first attack had been very accurate and though the charges had exploded too deep, they had caused leaks that could not be stopped. It was also clear that the presence of the aircraft had prevented repairs of the leaks, barred escape, and sealed the fate of the U-boat.[36]

Coincidence

Dönitz had decided that warships were secondary targets to be attacked only under favourable circumstances; such occasions did arise at times. On 20 January 1940, Captain Richard Benson of the destroyer *Exmouth* received orders to rendezvous with the 1,988-ton freighter *Cyprian Prince*

off Aberdeen and escort her to Scapa Flow.[37] The *Cyprian Prince*'s cargo consisted of ammunition, searchlights, A/A guns and vehicles for the defence of Scapa Flow and it was vital that she arrived safely at the anchorage. The two ships met in the afternoon and Benson had a brief signal sent by lamp: 'Proceed 070, speed 10 knots. Follow me'. Thereafter he positioned the destroyer ahead of the freighter and had a sternlight rigged, shining aft, to make it easy for Captain Benjamin Wilson and his officers to stay in touch during the night. In the early hours of 21 January, Chief Officer Albert Clark was on watch on the bridge of *Cyprian Prince*, which was a bit less than half a mile astern of *Exmouth*. Speed was still 10 knots, but course at the time was 330º. The sea was calm and visibility good. Captain Wilson was asleep below.



Destroyer *Exmouth*, 1939. (W&L)

At 04:44, while north-east of Tarbat Ness in the Moray Firth, Clark heard an explosion and, believing *Exmouth* was dropping depth-charges, called Captain Wilson to the bridge. Shortly after he arrived, at 04:48, there was a second, much larger explosion. It was unclear what was going on and Wilson ordered the engines of *Cyprian Prince* to be stopped while the helm was turned hard-a-port to clear what was believed to be the *Exmouth* dead ahead.[38] Cries were heard from the water and a number of small, flashing lights were seen. The engines of the freighter were stopped, and the crew of *Cyprian Prince* was standing by to lower the boats when Captain Wilson suddenly rang for 'full ahead', leaving the men in the water behind. He had realised that the destroyer had been torpedoed and the risk of his own ship suffering the same fate was evident if she stopped. *Cyprian Prince* continued northwards while its radio operator sent an emergency signal to Wick Radio.[39]

Unknown to Captain Benson, he had taken *Exmouth* and *Cyprian Prince* right in front of the torpedo tubes of *U22* under the command of Kapitänleutnant Karl-Heinrich Jenisch, operating south-east of the Orkneys. On the night of 20/21 January, Jenisch was on the surface off the Pentland Skerries. The moon was bright with an almost cloudless sky when three illuminated neutral ships came into sight, heading north-west. The identity of these ships is somewhat uncertain, but most likely the Danish *Tekla* and the Norwegian *Miranda* were among them. Earlier in the night, *U22* had turned away from what was believed to have been escorts operating in conjunction with a lighted decoy and Jenisch was careful to avoid a similar trap.[40] Observing the neutrals, contemplating whether to attack or not, to his great surprise, a blacked-out destroyer followed by a similarly darkened freighter loomed into his line of sight in front of the illuminated ships. In a remarkable coincidence, Jenisch was served two legitimate targets. By this time, the moon had set behind clouds in the horizon, and had it not been for the lights of the neutral ships, he would not have observed the darkened

ships at all. Jenisch ordered ‘full ahead’ to try to get into a good firing position.

I turn and track them, but cannot overhaul the destroyer. While turning to attack the steamer, we also fire at the destroyer at a range of 1,500 metres with an inclination of 110º. This hits after a running time of 2 minutes 35 seconds. Black cloud of smoke observed during detonation. We then fire a torpedo at the steamer, estimated size approximately 4,000 tons, from a range of 1,000 metres with an inclination of 80º. A *Versager* or a miss, perhaps due to change in course or speed of steamer in response to first detonation. The second torpedo explodes after 4 minutes 7 seconds.[41]

After a pursuit lasting almost an hour, Jenisch realised he could not overhaul the destroyer and ordered IWO Oberleutnant Schroth to fire one torpedo at her with a significant inclination. This hit *Exmouth* on the starboard side near the forward magazine, setting off a massive secondary explosion, literally tearing the bow of the destroyer clean off.[42]

The second torpedo, fired at *Cyprian Prince*, was heard by Jenisch to explode after a little over four minutes and dismissed as a miss. It is quite possible, though, that it actually hit the steamer, scraping along the hull without exploding, as some of the crew reported hearing a ‘banging noise’, moving down the side at about the right time. Perhaps the torpedo hit at an angle or the side of the hull of the freighter was too curved for the contact pistol to fire. After the torpedo cleared the ship, it would have continued to the end of its run to self-destruct.[43]

Jenisch tried to chase the steamer, but had to take avoiding action so as not to run into it. Thus the U-boat lost momentum, and when *Cyprian Prince* shortly after reached 13 knots, heading for the coast, *U22* was unable to catch her, the U-boat’s maximum speed being no more than 12.5 knots. Turning back, the Danish ship *Tekla* came in range and was promptly sunk, in spite of presumably being illuminated, displaying herself as a neutral.

The first news of the sinking of *Exmouth* reached the Admiralty shortly after *Cyprian Prince* anchored at Kirkwall at 13:00 on the 21st. The signal

Captain Wilson sent at 05:04 was apparently never received, either at Rosyth, or in London. Wilson also attempted to send visual signals by Aldis lamp to Noss Head, Duncansby Head and Muckle Skerry, as he passed each in turn, but did not get any response. In *U22*'s KTB, it is noted that an SOS was heard, presumably from *Cyprian Prince*, picked up and acknowledged by Wick Radio. This is also noted in the war diary of ACOS. When it was recognised that *Exmouth* had been lost, the destroyer *Sikh*, the minesweepers *Sphinx* and a number of trawlers were sent to the scene but no survivors were found – only some oil patches and surface wreckage. *Exmouth*'s entire crew of 189 men had been lost.[44]

An Admiralty Board of Inquiry shed little light on the sinking of the destroyer, but concluded that Captain Benson had given Wilson unclear instructions and that his signal 'Follow me' was inadequate. The destroyer should have taken station on the freighter, not the other way round, and showing a stern light was a grave fault, inviting attack. Neither ship was zigzagging and they were proceeding at a speed well below that of which the *Cyprian Prince* was capable. C-in-C Rosyth Admiral Ramsey added in a letter to the Admiralty on 21 March regarding the use of Asdic at night that he could not 'help thinking that too much confidence is placed in this instrument and that the older art of ensuring safety of ships convoyed viz. high speed and zig-zagging are not made use of as much as should be'.[45] Nobody seems to have taken into consideration the pure serendipity of the British ships venturing right in front of the illuminated neutrals.

Captain Wilson's decision to observe the instructions of the Admiralty, abandoning the survivors of the destroyer, was adjudged 'absolutely correct' by their lordships. There is little doubt that, had he stopped, *Cyprian Prince* would have shared the fate of *Exmouth*. Nevertheless, Wilson was so affected by the episode that he left his ship, never to take another command. *U22* vanished with all hands two months later, on 25

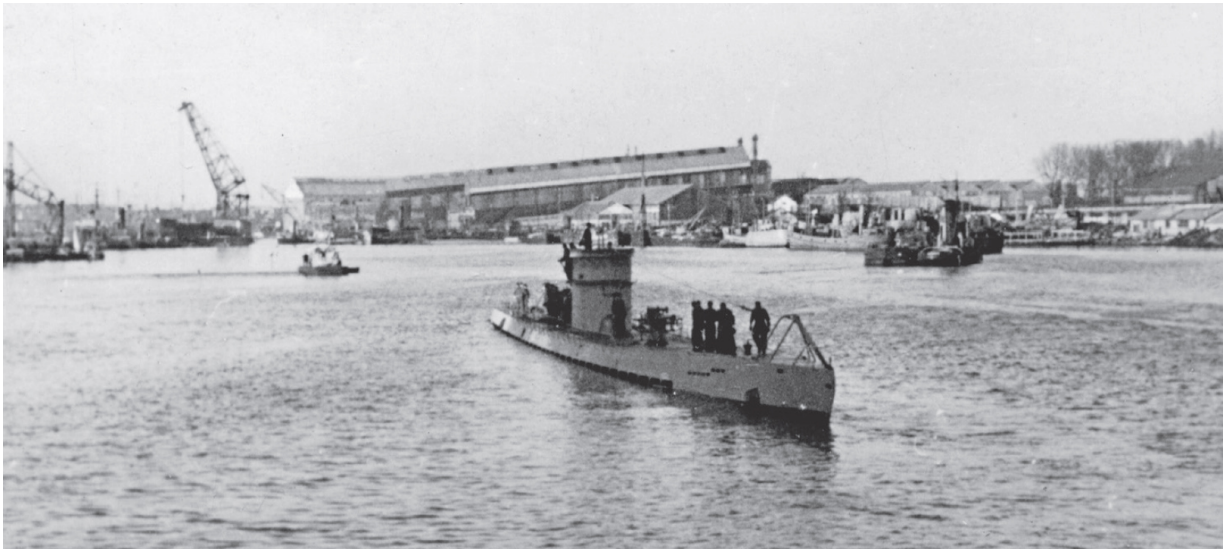
March on her fifth patrol, presumably the victim of a minefield off the Danish coast.[46]

Wolfpack

In the second half of February, Dönitz again attempted to assemble a wolfpack of U-boats. Several boats were already at sea and *U26*, *U41*, *U48*, *U50*, *U53* and *U54* received instructions to gather on Hartmann in *U37* in the Bay of Biscay. Meanwhile, the boats proceeded independently and would attack whatever came in their way. *U26* (Kapitänleutnant Scheringer) sank two Norwegian ships; *Nidarholm* on the 12th and *Steinstad* on the 15th, west of Ireland, the latter with a large loss of life. In between, on the 14th, the British *Langleeford* was also sunk. Before Scheringer could meet up with the wolfpack, though, *U26* developed a defect and had to set course back for Wilhelmshaven. Kapitänleutnant Bauer in *U50* sank the Swedish *Orania*, the Danish *Maryland* and the ballasted tanker *British Endeavour* before one of his diesels fell out and he had to turn back. Kapitänleutnant Gustav-Adolf Mugler of *U41* sank the British cargo liner *Beaverburn* of convoy OB-84 before he drew the shorter straw in a duel with the convoy's single escort, the destroyer *Antelope*. There were no survivors. Schultze in *U48* was nowhere near the rendezvous as he, after sinking four ships between 10 and 17 February, had set course for home, low on fuel and torpedoes.[47] Korvettenkapitän Grosse in *U53* sank five ships on his way to the rendezvous: the Norwegian *Snestad*, the British *Imperial Transport*, the two Swedish steamers *Dalarö* and *Norna*, as well as the Danish *Martin Goldschmidt*. *U54* was never heard from and was probably lost in a minefield in Heligoland Bight shortly after departure.[48]

Hartmann himself encountered and sank the Norwegian *Hop* and the British tramp *Leo Dawson* off Shetland before landing a pair of agents on the shores of Donegal Bay. Later, the Norwegian *Silja*, the British trawler *Togimo*, and the Danish steamer *Aase* were accounted for. Hence, a total of

twenty-two ships were sunk by the wolfpack on their way to the rendezvous but as three boats had turned back and two were sunk, by the time the pack assembled, it consisted of only two of the intended seven boats, *U37* and *U53*. Not quite what Dönitz had had in mind.[49]



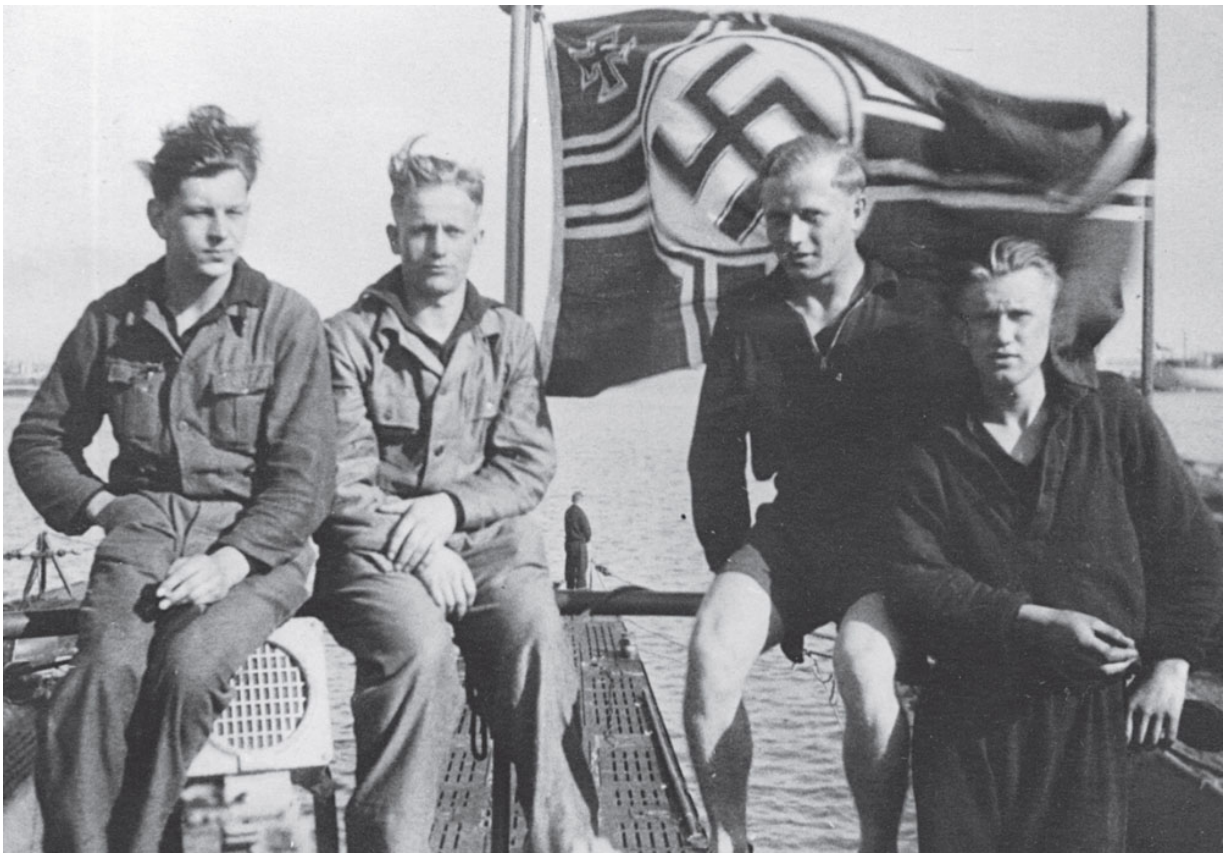
Korvettenkapitän Werner Hartmann taking the Type IX boat *U37* on patrol from Wilhelmshaven in October 1939. (Author's collection)

The first prey for Hartmann's meagre pack was two French convoys off the Portuguese coast that the B-Dienst had been monitoring for a while. In the event, Hartmann initially struck at the British convoy OG-18, sinking the liner *Pyrrhus* on 17 February. Next morning, he also sank the Greek-flagged *Ellin* sailing independently. A few hours later he finally picked up a homing signal from *U53*, which had intercepted one of the originally targeted French convoys, RS-10, west of El Ferrol. This was attacked, and a French steamer was sunk. Further attacks on RS-10 failed as the torpedoes consistently detonated prematurely or malfunctioned. Adding to the misery, Korvettenkapitän Grosse in *U53* fired on what turned out to be the Spanish *Banderas*, believing she was a straggler from RS-10. This time, the torpedoes worked well and twenty-two Spanish sailors were killed as the freighter sank, creating a political row which eventually resulted in the U-boats being banned from using neutral Spanish waters for refuelling, a significant blow to Dönitz. Out of torpedoes, Grosse and Hartmann headed for home. En route, *U53* ran into the claws of the British destroyer *Gurkha*. Commander Frederick Parham showed no mercy, and Grosse and all his men went down with their boat.[50]

After this fiasco for the U-bootwaffe, a relative lull fell over the Atlantic and the North Sea. Operation Weserübung – the invasion of Denmark and Norway – was being set in motion, demanding a redistribution of the forces at sea and in the air. In addition, many of the U-boats were in need of repairs and overhaul and the newbuilds had not yet caught up with the losses. The 1939/40 winter was harsh, with one storm after another, and operations west of Scotland and Ireland in particular were disrupted. Conditions on board the U-boats were extremely uncomfortable. Teddy Suhren, IWO of *U48*, wrote:

> The North Sea was in the grip of devilishly cold weather. The oilskins of the bridge-watch iced over with the spray. The drops of water remained hanging in eyebrows and beards and turned to ice immediately. Binoculars held in gloved fists misted over when you held them in front of your eyes. Nevertheless, we had to be on the alert, so as not to be taken unawares by the enemy aircraft. Inside

the boat, everything was damp. The electric heaters were no use against the cold. […] Our leather outer clothes absolutely refused to dry.[51]



Esprit de corps: men of *U41* looking determined but perhaps also slightly concerned. During the first months of 1940, irreplaceable losses and inexplicable torpedo failures rocked the morale of the U-bootwaffe. *U41* was lost with all hands to depth-charges from the destroyer *Antelope* south of Ireland on 5 February 1940. (Author's collection)

U-boat officers gathered in Wilhelmshaven in March 1940. The gathering was organised between the SKL and BdU, and on the agenda was Operation Hartmut, the U-boats' part of the invasion of Norway. (Author's collection)

On 5 March 1940, Dönitz was called from Wilhelmshaven to a meeting at Naval Headquarters at Tirpitzufer in Berlin. Here, he learned for the first time that plans were being developed for the invasion and occupation of Denmark and Norway – Operation Weserübung. During the first week of March, on orders from the OKM, most U-boats were withdrawn from the Atlantic. As soon as they had been serviced and the crews rested, they were sent into the North Sea with orders to observe absolute radio silence and attack only warships or obvious troop convoys.[52]

In the late evening of 26 March, Kapitänleutnant Wolf-Harro Stiebler, returning from a patrol off Scotland, lost his bearings and set *U21* firmly onto one of the southernmost skerries of the Norwegian coast east of Ryvingen Lighthouse off Mandal. When asked by the Norwegian naval vessels that arrived next morning why he had ended up there, Stiebler could think of no other excuse than 'compass error'. Navigational error was not accepted as a reason for a foreign submarine to be inside Norwegian territorial limits – as Stiebler should have known, had he paid the slightest attention to international rules and regulations. Now he had no option but to follow the destroyer *Odin* to Marvika at Kristiansand, where he, his crew and his boat were interned.[53] Hectic diplomatic activity ensued, but the Norwegian government was prepared to make a stand and the Germans remained in Norwegian custody until the invasion in April. Norwegian naval officers inspecting *U21* and studying the captain's charts and notes in the conning tower were not impressed by the navigational skills of the German sailors and concluded that the U-boat in all certainty had ventured into Norwegian waters unintentionally due to poor navigation.[54]

Ironically, Berlin saw an advantage arising from the occasion. The decision to invade Norway might be taken any time, and it was imperative that London and Paris in the meantime believed the Norwegians were

standing firm, so as not to create a race towards the western fjords.[55] Some pressure had to be maintained on Norway, though, in order not to arouse suspicion and there was always German pride to maintain, regardless of strategic issues; Kapitänleutnant Stiebler and his boat were sacrificed for the greater cause. He was ordered to destroy all secret documents on board, and that was it. Operation Weserübung was about to commence and, with it, an entirely new phase of the submarine warfare.[56]

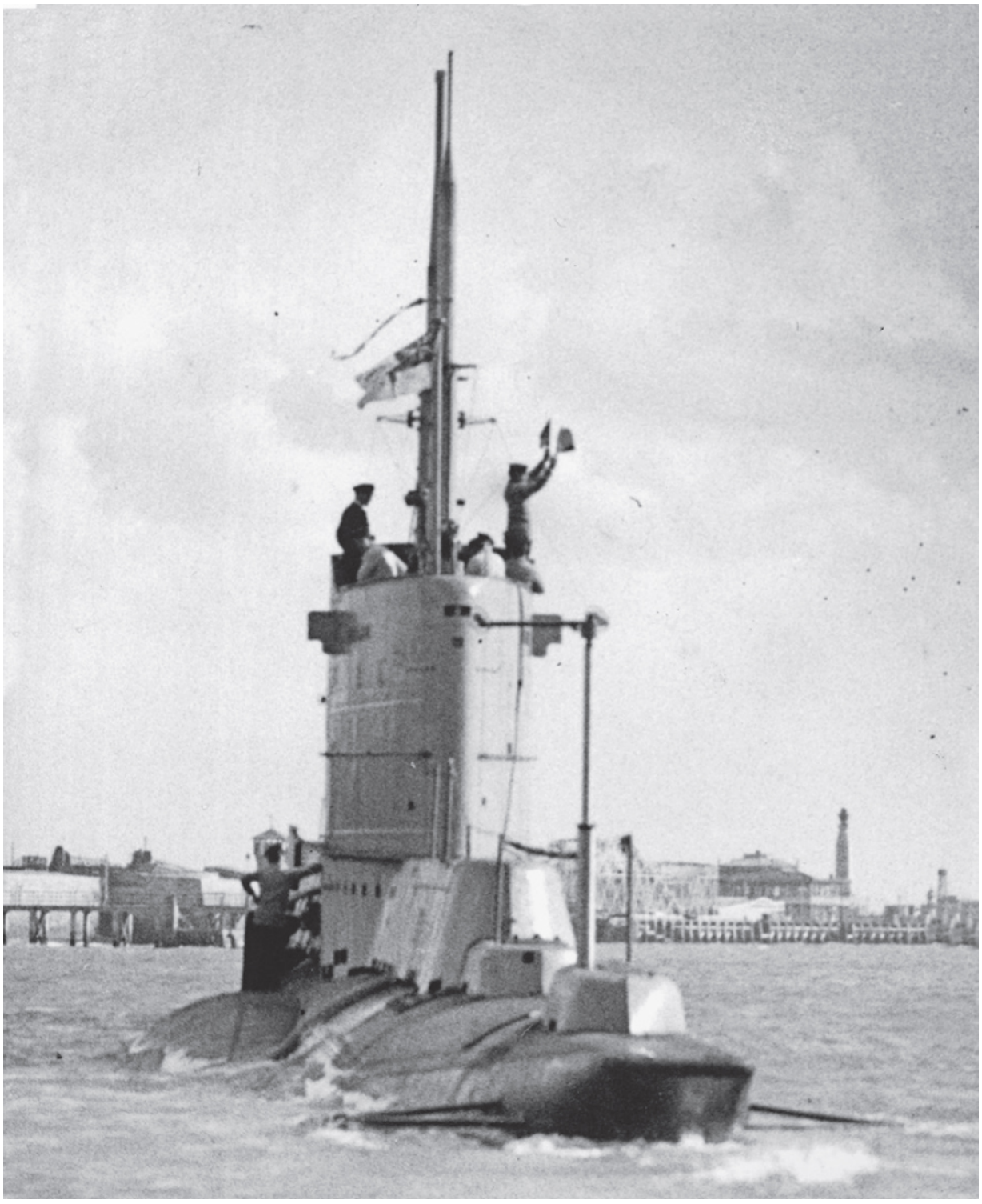
Following the confirmation of Operation Weserübung on 2 April, a total of thirty-two boats were at sea: fourteen Type VII and Type IX boats from Stadt and northwards and eighteen Type II boats in the Skagerrak and North Sea. At 20:30 on the 6th, a signal from Dönitz to all U-boats contained the codeword '*Hartmut*', indicating that sealed envelopes with orders written on water-soluble paper should be opened. The envelopes contained detailed orders for all boats to move into new positions along the Norwegian coast, taking care not to reveal their new positions. Allied warships and troop transports could still be attacked, but Norwegian or Danish ships should be left alone.[57]

7 March 1940: destroyers *Intrepid* and *Griffin* with A/S trawlers *Buttermere* and *Wastwater* attack a U-boat south-east of Wick, probably *U7*. In the left photo, one of the destroyers is attacking what appears to be the end of an oil slick while the other is guiding it from a distance, using the Asdic. In the right-hand photo the splashes from the depth-charges thrown to the sides can be seen, while two or three more presumably were dropped from stern. The photos were taken from a 269 Squadron aircraft from Montrose. No U-boat was sunk on this day but the oil leaks indicate some damage was done. (NA-ADM 199/137)

— 15 —
The Thin Grey Line

Patrols

As WERE THE GERMAN U-boats, British submarines were also sent on patrol prior to the actual outbreak of war. On 31 August 1939, five submarines were off southern Norway while six were in the Heligoland Bight between Horns Reef and Terschelling on either side of the Westwall declared mine area.[1]



Seahorse, October 1933. (W&L)

On 4 and 6 September, respectively, *Sturgeon* and *Seahorse* were attacked by RAF aircraft while returning to Dundee from their first patrols. Fortunately there was no damage or injuries but the incidents led to an immediate revision of routines to keep aircraft and submarines separated. In some areas, no submarines could be attacked, even if positively identified as German. In others, surface escort was provided. In all cases, the passage of submarines through the coastal areas was forwarded from RA(S) to Coastal Command and the regional RAF command centres. Nevertheless, adverse weather and challenging navigation resulted in somewhat frequent attacks by eager airmen on boats as they departed from or returned to base. Recognition signals had limited use as few captains stayed on the surface long enough to use them when sighting an aircraft.[2]

When the U-class boats *Undine, Unity* and *Ursula* returned from their first patrols, it was found that all three had extensive cracks in the main engine frames. Repairing this put them out of service for over a month, further reducing the strength of the British North Sea submarine grid.

During October, discussions were initiated in the Admiralty over the use of the submarines. So far, little had been achieved and, compared to the aggressive German use of their boats, British tactics looked tame. Admirals Forbes and Watson discussed various ideas for using submarines to hunt U-boats or as convoy escorts or to hunt German merchant raiders in the Atlantic. The major challenge at this stage of the war was the small number of German ships at sea, outside the Baltic, the Skagerrak and the Kattegat. Rear Admiral Watson, believing his submariners needed more experience and adaptation to war, was reluctant to order his boats into the eastern Skagerrak, not to mention through the Belts and into the Baltic, in spite of encouragement from Churchill to do just that.

By the end of October, a number of new submarines had been added to the home water strength, including half a dozen boats recalled from the Mediterranean and the two Polish boats *Orzeł* and *Wilk*. On the other hand,

it had become clear that the old H- and L-class boats were not up to the rigours of the North Sea and it was time for a reorganisation.

After some discussion, it was decided that the Dundee-based 2nd Flotilla under Captain William Stephens should focus on the German iron-ore traffic in the northern North Sea and merchant ships that had eluded the Northern Patrol. It would be composed of the T-class boats *Triton, Triumph, Thistle, Triad, Trident*, the two Poles and the minelayers *Narwhal* and *Cachalot*. In March 1940, *Seal* and *Porpoise* were also transferred, ending their tedious assignment as convoy escort on the Halifax route. The depot ship *Forth* was also assigned to the 2nd Flotilla.

The new 3rd Flotilla, consisting entirely of S-class boats, *Seahorse, Swordfish, Seawolf, Starfish, Sunfish, Shark, Sealion, Salmon* and *Snapper*, formed at Rosyth during October under Captain Philip Ruck-Keene. The depot ship *Cyclops* was also assigned.[3] The 6th Flotilla operated from Blyth under Captain Jock Bethell with *Undine, Unity, Ursula, Sterlet, Sturgeon, Spearfish, L23, L26, L27* and the depot ship *Titania*. In January 1940, *Severn* and *Clyde* were also transferred to the flotilla from Freetown as their patrol area in the South Atlantic was taken over by the Marine Nationale.[4] The 3rd and 6th Flotilla were to operate in the central and southern North Sea, targeting German naval units, including U-boats.

At Gosport, Captain Cyril Coltart's 5th Flotilla, originally intended for training, covered the Channel and Western Approaches with *H28*, *H31*, *H32, H33, H34, H43, H44, H49, H50* plus *Thames, Oberon, Porpoise, Tribune* and *Truant*.[5]

Modifications to these assignments would be frequent, as refits, repair and damage reduced the number of active boats in any one flotilla.[6]

In February, *L23* was depth-charged off the Danish coast and limped home with severe damage. *H31* and *H49* were lost before the H-class boats were withdrawn from frontline service in late 1941. *H28* is the only British submarine known to have been on active patrol in both wars.

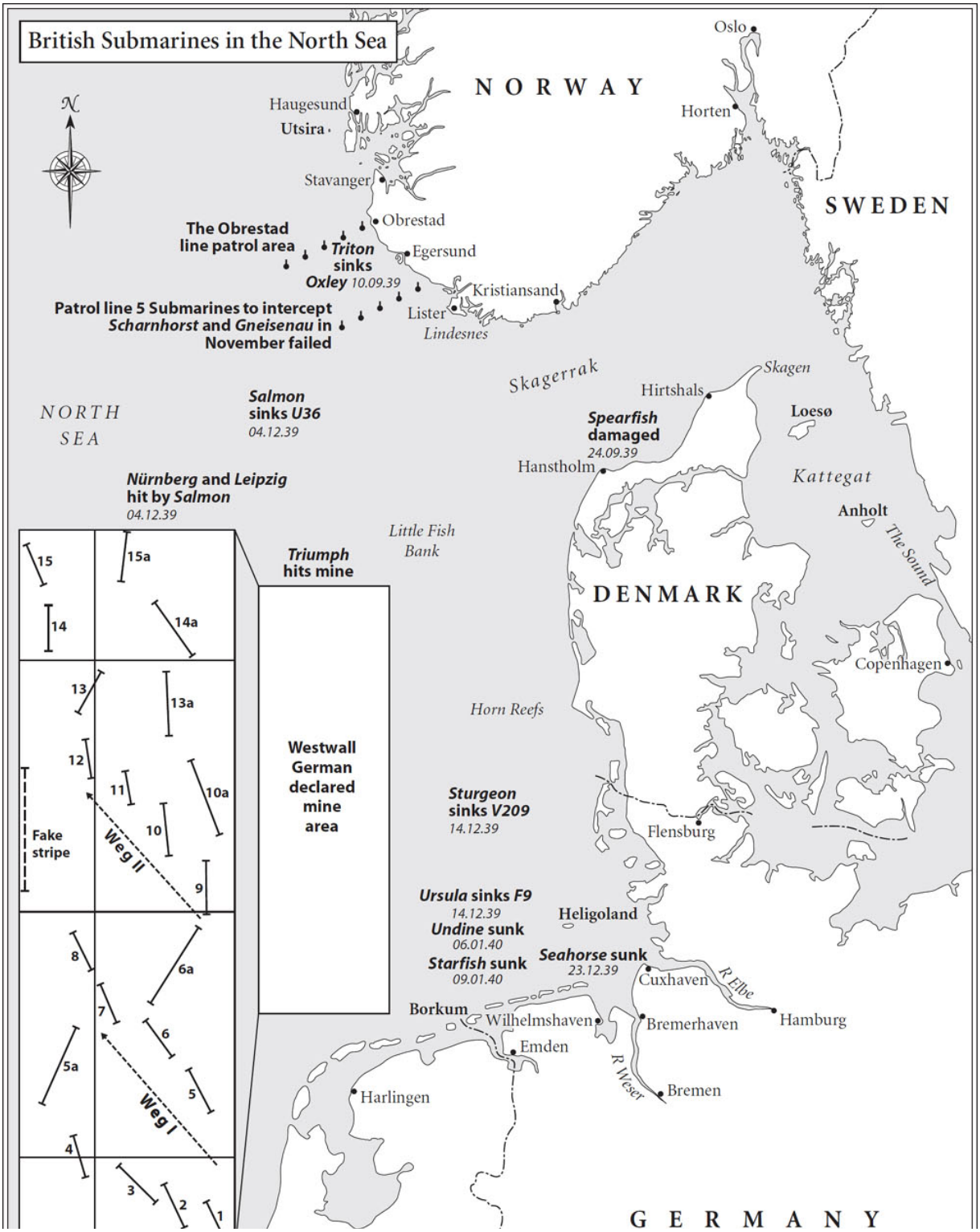
Vintage British submarines of the 6th Flotilla. *H34*, *H44*, *H43*, *H32* and *H50* secured alongside their depot ship *Alecto* at Portland in the 1930s. As the war commenced these boats were transferred to 5th Flotilla, operating in the Channel and Western Approaches until 1941. (W&L)

A Slight Drizzle

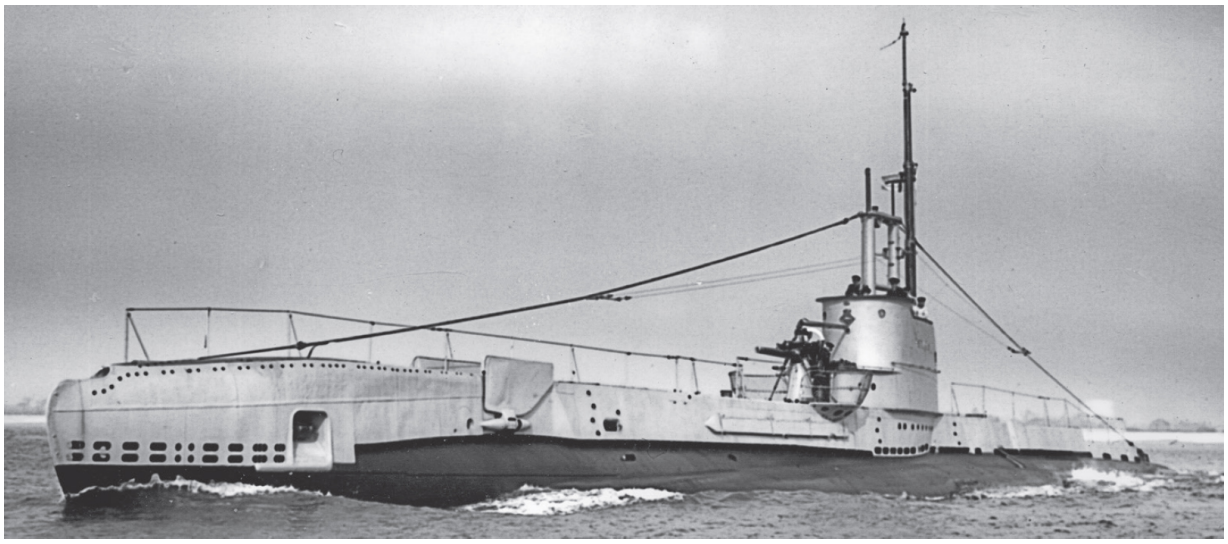
During the first months of the war, the inadequate performance of the main aircraft of the Coastal Command, the Avro Anson, would influence the disposition of the Royal Navy's submarines. The Anson was a sturdy, reliable workhorse, but its lack of speed, range and armament made it totally unsuitable for reconnaissance patrols into the North Sea.[7] With a range of no more than 510 miles, the Ansons could not even make the return flight to the Norwegian coast from Montrose, having to turn back 60–80 miles short of the territorial boundary. Hence, the easternmost part of the patrol line had to be covered by submarines, stationed at 12-mile intervals along a line off Obrestad Lighthouse, south of Stavanger. The first five boats on what was to become known as the Obrestad Line, *Seahorse, Starfish, Triumph, Spearfish* and *Sturgeon*, were in place from 26 August onwards.[8] They quickly experienced significant problems in maintaining their positions due to difficult radio fixing and reluctance by the commanders to surface during daylight due to the risk of being sighted by German aircraft. Later, towards the end of September, as sufficient Hudson aircraft became operational and Coastal Command was capable of covering the whole length of the reconnaissance line from Scotland to Norway, the submarines were given a freer hand off the south-west coast of Norway and into the Skagerrak.[9]

On 3 September, *Spearfish* had just arrived on the Obrestad Line west of Egersund when the 'Total Germany' signal arrived. Literally minutes later, a torpedo track was observed ahead, missing the submarine by a few yards. It 'appeared to have been set for a shallow depth and was most noticeable when passing through waves', Lieutenant John Eaden, *Spearfish*'s commander, wrote. He ordered an emergency dive and turned in the direction the torpedo had come from, Asdic alerted. Strong hydrophone effects were picked up and a nerve-racking chase followed. At one stage,

the two boats were probably no more than 20 yards apart, but there was no contact and, about nine hours after being fired at, Eaden surfaced. The U-boat, *U20*, was nowhere to be seen.[10]



Modified from several sources, including Jones, *Submarines versus U-Boats* and Kutzleben, Schröder and Brennecke, *Minenschiffe 1939–1945*.



Spearfish. (Author's collection)

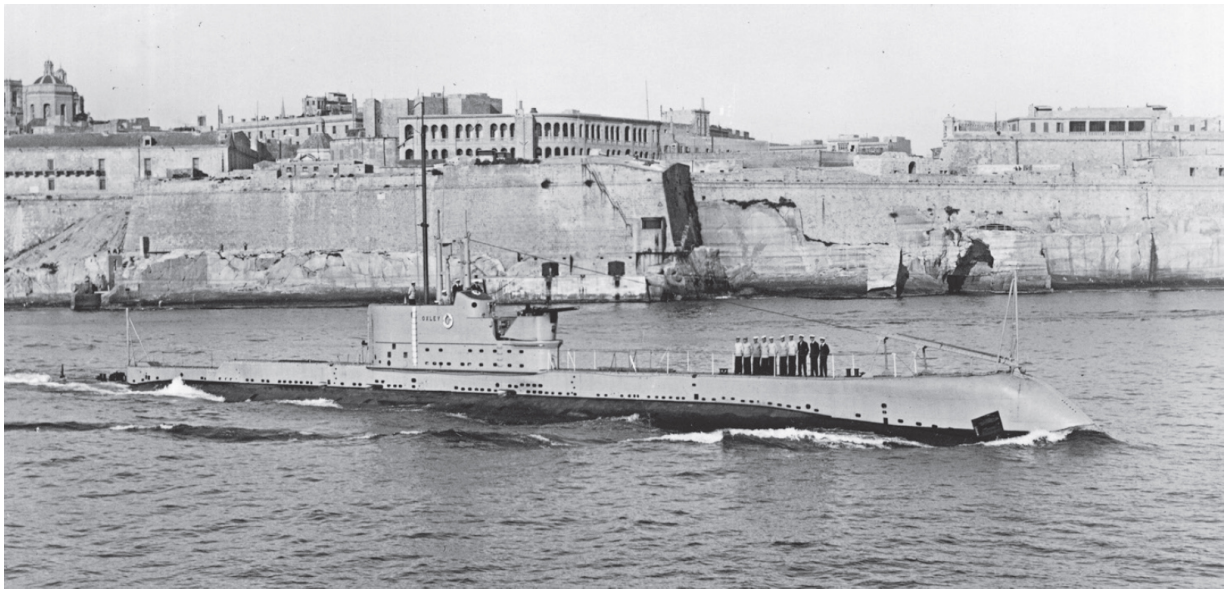
A similar event occurred a week later, on 9 September, when Lieutenant Commander George Phillips of *Ursula* fired four torpedoes from 1,000 yards at *U35* north-west of Borkum. The splash of the discharge was sighted by the German lookouts in spite of the failing afternoon light, and the IIWO Leutnant Hans-Joachim Roters was able to turn the boat towards the stalker, combing the tracks and, once through, turned away at maximum speed.[11] On 8 November, *Sealion* missed *U21* with a full bow salvo of six torpedoes.

Submarines hunting submarines sounds intriguing, but during WWII this was not easy. With the tools available, finding and tracking another submarine without risking becoming a target oneself was largely serendipitous. The torpedoes of the day were not suitable for an attack on a submerged adversary and on the surface the torpedoes often passed underneath the opponent due to its shallow draught.[12]

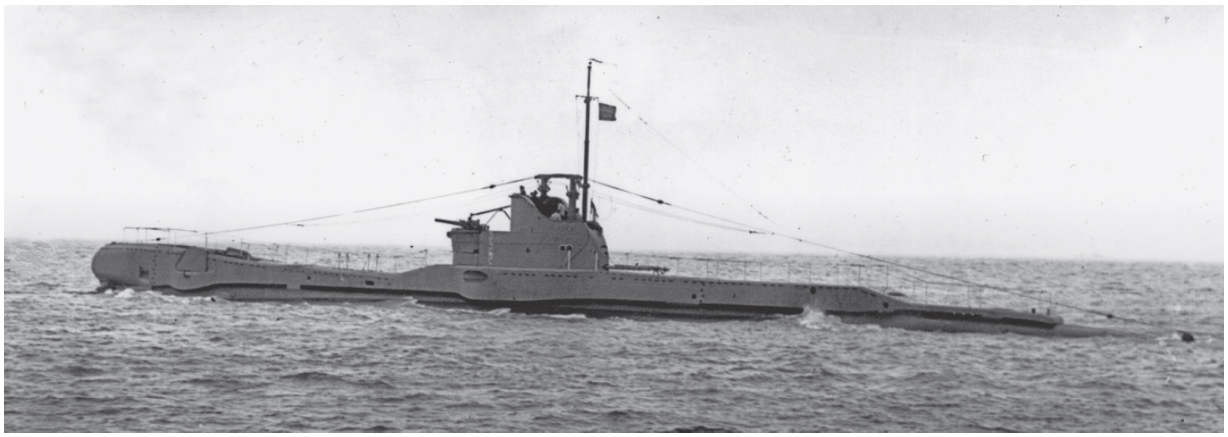
A week into the hostilities, *Oxley, Triton* and three other submarines were on the Obrestad Line, some 12 miles apart according to orders from RA(S).[13] The two submarines had been in regular contact and, on 10 September, communication during the afternoon indicated that *Oxley* was fairly close – at one stage just over 2 miles – but not dangerously so.[14] At 19:55 *Triton* surfaced and Lieutenant Commander Hugh 'Pat' Steel had his position fixed relative to the Obrestad and Kvassheim Lighthouses on the Norwegian coast. Ascertaining his submarine was inside its patrol area, Steel initiated a slow zigzag, steering south and switching one engine to charging the batteries. Having assured himself that the area was clear, he gave the bridge to the officer of the watch, Lieutenant Harry Stacey, and went below, leaving orders that he was to be called if anything unusual appeared. Shortly before 21:00, Steel was called to the bridge:

'I went straight up. The night was dark and there was a slight drizzle and I could see nothing except the shore lights. The Officer of the Watch

informed me that there was a submarine fine on the port bow, which for the moment I could not see.’



Oxley, February 1935. (Author's collection)



Triton. (Author's collection)

Leading Signalman Cavanaugh was sent for and, when Steel shortly after could make out the shape of an object in his binoculars, he took command of his boat. Orders were given to proceed on the main motors, breaking the charge, and the external bow tubes, Nos 7 and 8, to stand by. This automatically brought Lieutenant Watkins, in charge below, to order the men to diving stations. Steel realised he was observing a submarine, steering in a north-westerly direction:

> It occurred to me that it might be *Oxley* and I dismissed the thought almost as soon as it crossed my mind because earlier in the day I had been in communication with *Oxley* and given her my position accurately […]. I then ordered the challenge to be made as soon as my sights were on and I knew the armament was ready, and the signalman made it slowly. No reply was received. After about 20 seconds I ordered the challenge to be made again. During this time I had been studying the submarine very closely indeed. She was trimmed down very low and I could see nothing of her bow or shape and the conning tower did not look like *Oxley*'s, and I could not see any outstanding points of identification such as periscope standards, etc. Accordingly, I ordered the second challenge to be made. Receiving no reply to the second challenge, I made a third challenge again after a short interval. Receiving no reply to the third challenge I fired a rifle grenade which burst correctly. […] By this time I was completely convinced that this was an enemy submarine. I counted fifteen slowly to myself […] and gave the order to fire. No. 7 and No. 8 tubes were fired at three-second intervals. About half a minute after firing, indeterminate flashing was seen from the submarine. This was unreadable and stopped in a few seconds. […] Very shortly afterwards […], one of my torpedoes hit.[15]

A fix was taken at this time, using Obrestad and Eigerøy Lighthouses, putting *Triton* well inside her own sector. Remaining on the surface, Steel took his boat towards the area of the explosion to investigate, and cries for help were soon heard – in English. The light from the Aldis lamp revealed three men swimming amid oil and debris. Lieutenant Commander Harold Bowerman, *Oxley*'s commanding officer, and Able Seaman Guckes, one of the lookouts, were rescued. The third person in the water, Lieutenant Manley, was not recovered. Fifty-three men died.

A Board of Inquiry found that *Oxley* was 'considerably to the eastward of her estimated position', probably due to an unexpected tidal current. The

crew of *Triton* had acted correctly and was not to blame for the sinking. The lack of response from *Oxley* was explained by Bowerman as follows:

> On emerging from the upper conning tower [to the bridge], the Officer of the Watch told me that a submarine was just abaft the starboard beam and had fired a grenade. He told me that we had fired a grenade in answer but that it had failed to function. I asked him if he had made the private signal reply. He answered yes, but must have been hesitant or doubtful because I remember telling him to make it again to be certain. He had just commenced making it and I had by this time got out of the conning tower […] when I saw a flash immediately beneath me and heard a dull explosion and the ship shook. She seemed to list to port and break in two from the centre.[16]

Lieutenant Manley, *Oxley*'s officer of the watch, thus believed he had answered *Triton*'s challenges. No signals were observed on board *Triton* though, prior to the 'indeterminate flashing', not recognised as Morse, after the torpedoes had been fired.

Lieutenant Commander Steel was completely exonerated and all fault applied to *Oxley*'s navigation and watch keeping. Some fault was attributed to Lieutenant Commander Bowerman for *Oxley* being out of position. A reconstruction at the inquiry put *Oxley* close to the eastern limit of her patrol area in the afternoon, and found that the course Bowerman had steered later did not allow for the currents in the area. The main blame for the disaster was nevertheless attributed to Lieutenant Manley, for not 'having kept or seen kept a proper lookout'. According to routine on the bridge, *Oxley* had only three men on watch, the officer of the watch being responsible for one 120-degree sector. This was convenient, considering the crew on board and the space on the bridge, but found insufficient in wartime as the lookouts should have undistracted attention to their task, which the officer of the watch could not always be expected to give. On board *Triton*, there were also three men on the bridge, but here the two lookouts had one 180-degree sector each, with the officer of the watch in general charge.[17]

For several reasons, the disaster was kept from the public, all the more so as Lieutenant Commander Bowerman was not tried before a court

martial. The disappearance of *Oxley* could not be concealed from the men of the Submarine Command, though, and in spite of the exact circumstances remaining obscure, it was common knowledge that she had been sunk by one of their own boats. The boats still on the Obrestad Line were spaced another 4 miles apart and instructed to show extra vigilance.[18]

A few days later, on 14 September, three torpedoes from *Sturgeon* narrowly missed *Swordfish* in a similar situation east of the Firth of Forth. *Sturgeon* was outbound, *Swordfish* on her way home, and Lieutenant George Gregory of *Sturgeon* had access to information that *Swordfish* was expected – if not exactly where – when she was encountered on an unanticipated northerly course. Stricter procedures for separation of outbound and inbound submarines as well as disseminating information on the whereabouts of friendly boats were enhanced and on the last stretch towards base, surface escort was introduced.[19] A month later, on 14 October, Gregory brazenly attacked *U23* 20 miles west of Skagen, but again failed to hit. This was the fourth unsuccessful attack by a submarine on a U-boat within a few weeks, and RA(S) issued instructions that U-boats were targets worth a full salvo, should conditions be favourable.[20]

Sweepstake

Lieutenant Gregory claimed his first success on 20 November. On that day, he fired four torpedoes from *Sturgeon* at two German A/S trawlers north-west of Heligoland. One of them hit and sank the 428-ton *V209 Gauleiter Telschow*, the first successful attack by any British submarine during WWII. Gregory observed that the A/S trawlers frequently stopped or proceeded very slowly, correctly gauging that this was necessary to optimise the use of their sonars. He also added:

> After being on patrol for twelve days, the reduced efficiency on the part of the personnel was very marked and reactions to orders slowed up. It is difficult to keep an S-boat's crew keyed up for a much

longer period of time and it is considered that no S-boat should carry out a patrol of a duration greater than fourteen days.[21]

The T-class boats were somewhat larger but Commander Robert Stirling-Hamilton of *Thistle* also found that routine and discipline were needed:

During *Thistle*'s first patrols [in October, November and December 1939 in Skagerrak], when we were diving from roughly five in the morning until eight at night and it was necessary to preserve the air in the boat by doing no cooking while under water, we evolved a routine of changing night and day. […] The transition period was a bit difficult, but served well once the scheme was under way. […] Both the officers and the ratings were organized in three watches, the officers keeping two hour spells throughout and the men two hours while dived and four hours on the surface, although the lookouts on the bridge at night changed every hour. Only the watch on duty was used to dive the boat and we slipped under in fairly slow time, usually shortly after six a.m., while it was still dark, and retired to ninety feet until it was possible to see through the periscope. This was an hour to an hour and a half after diving, depending on the weather.[22]

During daytime, most of those off watch retired to their bunks to minimise the use of oxygen while watch was kept by listening and occasional use of periscope. By the time darkness had returned, *Thistle* would prepare to surface, usually around 17:00 at this time of the year.

All hands were at their stations for surfacing as this was an anxious moment when the boat might have to crash-dive in a hurry. When all was ready below and the operators had had a good listen round to make certain no ships were near, tanks were blown and the submarine brought to the surface with all possible speed. I opened the hatch and went onto the bridge with the signalman as soon as the conning tower broke surface, and we had a quick look around to make sure that there was nothing near, followed by a more thorough search. Next, lookouts were placed, the tanks were blown some more to give the minimum buoyancy required by the weather conditions. The electric motors were stopped and a charge put on the batteries by one engine, while the other engine was clutched to drive the boat at about five to eight knots. […] After all was settled for the night, hands off watch fell out and we had breakfast.[23]

The time on surface was spent cleaning up the boat, carrying out repairs, preparing hot meals – dinner at 20:00 and tea at midnight. Stirling-

Hamilton spent most of the night on the bridge, when not eating, planning courses or deciphering signals.[24]

There were few encounters with German ships in general, and none with warships that could make any targets. Strict adherence to international prize law made the merchant ships virtually immune as the number of German aircraft and A/S escorts for all practical purposes prevented any 'stop-and-search' procedures to be followed. After one patrol off the Danish coast, Stirling-Hamilton reported several encounters with the bottom while diving from German aircraft, giving a hard time to the nerves of the crew as well as the hull of his boat. He also found it difficult to hold position in the shallow waters due to constantly surging up and down, draining the batteries to control the boat. On 2 February 1940, *Thistle* docked at Rosyth having completed five patrols in the Skagerrak and the northern Kattegat. Seventy-four days had been spent at sea, thirty-four of them under water. She had steamed 11,000 miles, 2,000 of them under water. No breakdowns had been experienced – but no successes either.[25]

In the small hours of 25 September, an emergency radio signal was received at the Home Fleet from the submarine *Spearfish*. She had been badly damaged off Horns Reef during a lengthy chase by German A/S trawlers the day before, and was unable to dive. In the afternoon, while on the seabed observing absolute silence,

> 6 single charges were exploded at various ranges. The ratings started a sweepstake as to when the next charge would land. Enemy A/S forces must have had strong contact with some object, possibly a wreck, luckily not us. 25 single charges of varying strengths were exploded between 14:30 and 16:10. These charges 'thumped' the boat but did no damage. At 17:20, some form of wire or grapnel was heard passing over the after jumping stay. Next, a bump on the after casing followed by a series of short bumps moving aft. The charge then exploded with a most appalling crash. The whole ship appeared to spring inwards and then open out again. Nearly all lights were smashed including glass shades. In the darkness spurting of water and hissing of escaping air could be heard.[26]

Spearfish had obviously escaped destruction by the narrowest of margins and after fitting only a few new lightbulbs to avoid making unnecessary sounds, Lieutenant John Eaden decided it was time for a 'tot of rum to all officers and men'. While this was savoured, damage was checked and it was clear that the boat was in severe peril; there were several leaks aft and damage to the engines and they would have to surface soon if they were ever to surface at all. To the relief of the submariners, the Germans seemed not to have realised what had happened. Several more depth-charges were heard but gradually they moved away and at 20:30 the battered submarine was at the surface. Both engines could eventually be started and, in spite of the severe leaks, Lieutenant Eaden endeavoured to get his boat home via Danish territorial waters and asked for escort across the North Sea.

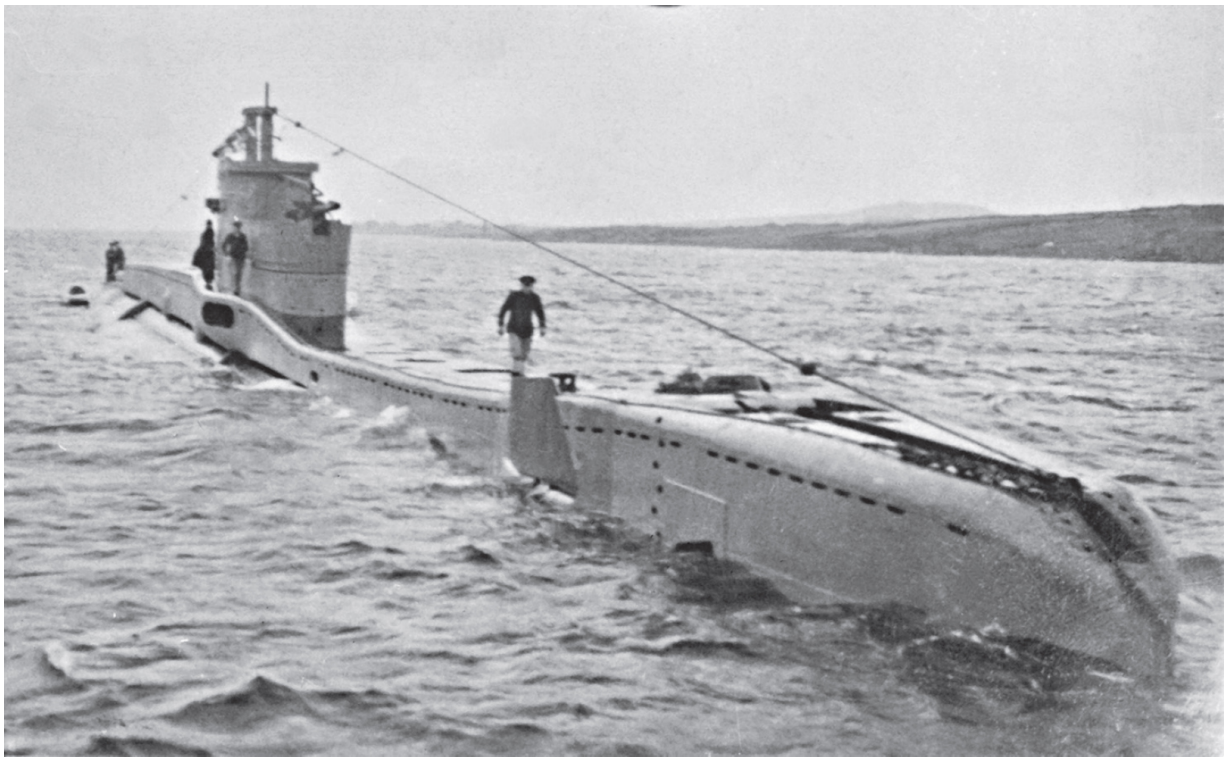
Admiral Forbes ordered Vice Admiral 2nd Cruiser Squadron Edward-Collins in *Southampton* with *Glasgow* and destroyers *Jervis* and *Jupiter* to sea with all despatch, while Captain (D)6 Randolph Nicholson with *Somali, Mashona, Matabele* and *Eskimo*, already off the Norwegian coast south of Bergen, was ordered to set course for Denmark and meet up with 2nd Cruiser Squadron on the way. Meanwhile, the rest of the Home Fleet also took to sea. *Hood* and *Renown* with 18th Cruiser Squadron and destroyer support were positioned to cover the rescue operation from the north while Forbes positioned himself with *Nelson, Rodney, Ark Royal* and six destroyers in the Bergen–Shetland narrows.

Meeting up with *Spearfish* north of Rinkøbing at 00:45 on the 26th, *Matabele* and *Eskimo* took station on the submarine while *Mashona* and *Somali* remained with the 2nd Cruiser Squadron, reinforced by cruisers *Aurora* and *Sheffield*, screening from a distance. German reconnaissance flights found the covering forces, resulting in bombing attacks on them (see Chapter 16), but there was no interference with the submarine and its escort, which arrived in Rosyth without mishap next morning.[27]

In late November, *Triad* (Lieutenant Commander Jonas) was on patrol in heavy seas off south-western Norway when the hydroplanes jammed in the 'rise' position and she could no longer dive. *Inglefield* and *Maori* were detached from the Home Fleet to proceed to her assistance.[28] Captain Percy Todd of *Inglefield* narrated:

> At 14:00 [on 27 November], I located *Triad* and proceeded to take her in tow. This was completed by 16:15 and I proceeded for Rosyth at 5 knots. At 18:00 the tow parted and as I had not another suitable wire, I ordered *Maori* to take *Triad* in tow. From 18:00 to 09:00 on the 28th, *Maori* endeavoured to take *Triad* in tow, but the weather was deteriorating and conditions were quite unsuitable. I ordered the submarine to proceed stern first into the wind, which was her only method of progression. The destroyers proceeded to patrol round the submarine.[29]

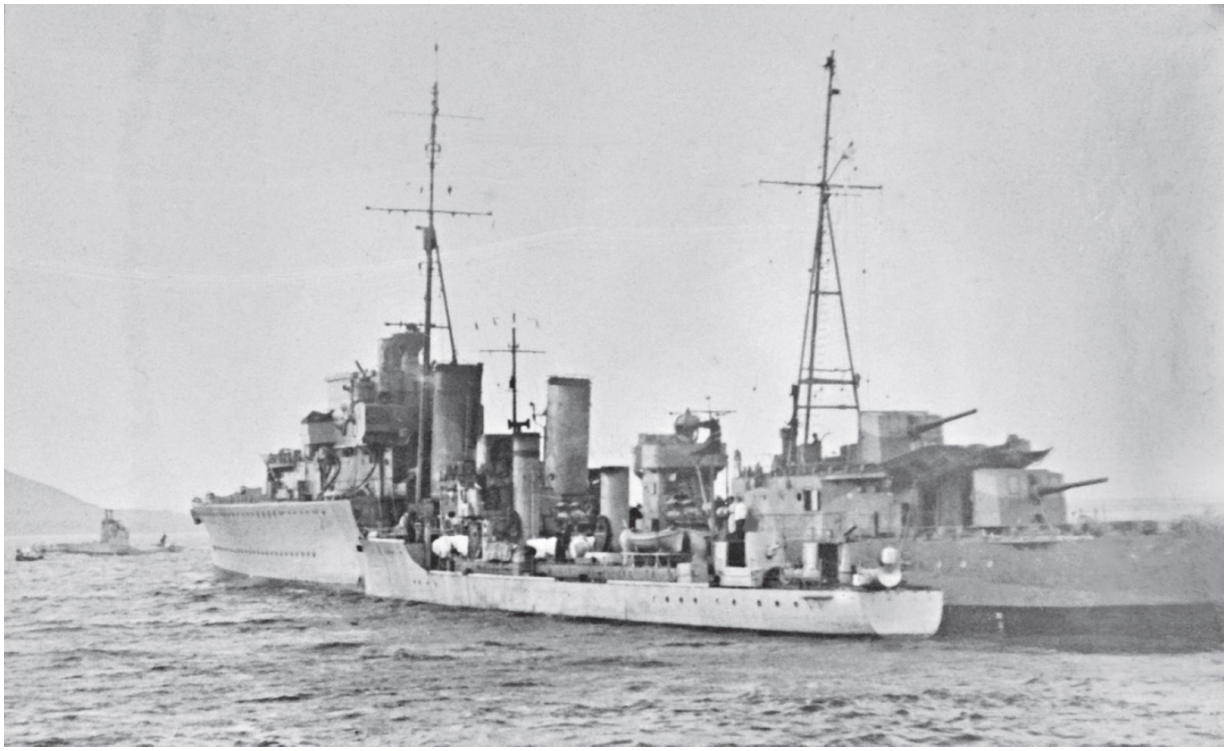
Shortly after, three Coastal Command Blenheims arrived to assist in the escort. One of them was given the status by visual signalling and ordered by Captain Todd to move well clear of the ships before forwarding this by radio signal to C-in-C Home Fleet. The weather deteriorated further and by nightfall a full gale was blowing. During the night, contact was lost with *Triad*, but by 08:00 on the 29th the two destroyers had regained contact. The submarine *Triumph*, which had joined the group during the previous afternoon, was not to be seen and ordered by radio to resume patrol as she was better off handling the storm on her own. A new aircraft, a Hudson this time, arrived and, following the same procedure as the day before, updated the C-in-C on the situation. Tugs had not been able to depart Rosyth and during the morning Todd, who considered taking the crew off the submarine and scuttling her, received:



Triad entering Norwegian waters in Mastrafjord north of Stavanger on 30 November 1939. Having sustained genuine weather damage, this was legitimate, provided the Norwegian authorities were notified of her presence. (Riksarkivet PA-1209Ui199401-001)

a signal from the Admiralty to return to Norwegian territorial waters with *Triad* to await the arrival of *Bandit*. Almost simultaneously, a signal was received from the C-in-C Home Fleet, ordering me to continue the tow to the Westward. In view of another gale warning and the fact that *Triad*'s last towing pendant was in use, I decided to take *Triad* into territorial waters and endeavour to effect temporary repairs with the combined resource of destroyers and submarine to enable the latter to return to Rosyth under her own power.[30]

The three British ships dropped anchor in Mastrafjord north of Stavanger at 07:15 on 30 November. Under the prevailing conditions, and with *Triad* having sustained genuine weather damage, this was legitimate, provided the Norwegian authorities were notified of their presence. It is not clear in which manner the Norwegian authorities actually were notified, but a few hours later, a MF11 seaplane landed alongside *Inglefield*. The pilot, Lieutenant Bjørn Fraser, climbed on board, saluted smartly and enquired the reason for their presence. After the situation was explained by Captain Todd, Fraser informed him that according to the Norwegian neutrality law, the destroyers would have to leave within twenty-four hours, while the submarine could remain until repairs had been effected. Shortly after, the torpedo boat *Stegg* also arrived from Skudeneshavn with the British consul in Stavanger on board. During the day it became clear that it would not be possible to repair *Triad* on site, and arrangements were made for her to be towed to Rosenberg yard in Stavanger by a Norwegian tug. Once the tug had arrived and all arrangements were in order, the two destroyers left Norwegian territorial waters.[31] *Triad* herself left quietly a few days later, having completed the repairs. She was escorted to the border by *Trygg* and reached Rosyth on 3 December. This episode has many interesting aspects, among them the inability of the destroyers actually to assist *Triad*, the Admiralty's direct interference in the operation, and the prompt Norwegian support given to a British submarine.[32]



The Norwegian torpedo boat *Stegg* alongside British destroyer *Inglefield* with *Triad* in the background. The British consul in Stavanger was brought to the scene on board *Stegg*. During the day it became clear that it would not be possible to repair *Triad* on site, and arrangements were made for her to be towed to Rosenberg yard in Stavanger by a Norwegian tug. Once the tug had arrived and all arrangements were in order, the British destroyers left Norwegian territorial waters. (Riksarkivet PA-1209Ui199-01-002)

On 26 December 1939, *Triumph* was on patrol north of the German declared minefield. First Lieutenant Leslie Bennington was officer of the watch with three lookouts on the bridge. At 23:06, the moon came out from behind a cloud and he sighted a mine floating sluggishly dead ahead, a few feet away. There was no time to react other than to shout 'hard-a-starboard' down the voice-pipe and hope for the best. The batteries were being charged, with one engine unclutched from its propeller, and the boat was slow to answer the helm. The mine exploded with a large sheet of flame, temporarily blinding the men on the bridge. Below, a loud metallic crash brought everyone rushing to their emergency stations, closing watertight doors, wondering what had happened.[33] Strangely, none of the torpedoes exploded in spite of a large part of the bow being blown away and the torpedoes completely wrecked. From one tube, the whole torpedo was missing; in another all that remained was the tail end, while a third had severe damage to its warhead. There was damage to the pressure hull and cracks in the forward bulkhead, but the watertight partition leading to the torpedo tube space held.

Triumph alongside the depot ship *Titania*. On 26 December 1939, a large part of the submarine's bow was blown away and the torpedo compartments completely wrecked. There was damage to the pressure hull and cracks in the forward bulkhead, but the watertight partition behind the torpedo tube space held. (Nat. Mar. Museum DKJ-1)

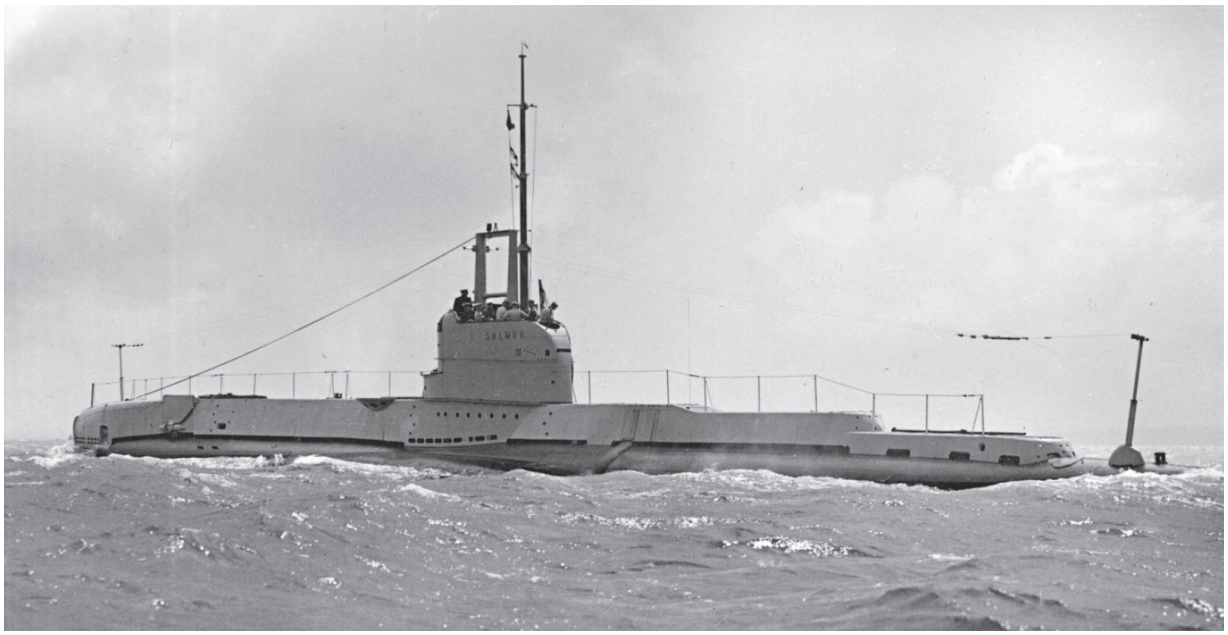
Lieutenant Commander John McCoy realised that if he closed the watertight doors, sealing off the damaged areas, water would be trapped in front of the doors and the boat would sink. There was no alternative but to keep all pumps operating at full capacity, plug as many leaks as possible and head for home. The weather was poor, and an agonising 2.5 knots was all that could be made. German aircraft were expected at any time, but by the time the Luftwaffe had coordinated its forces for an attack, the RAF had arrived, securing an escort. Eventually, *Triumph* limped into Firth of Forth to spend six months in dock.[34]

At Periscope Depth

The submarine *Salmon* under Lieutenant Commander Edward Bickford was to have a particularly interesting patrol in late 1939. Leaving Rosyth for patrol on 2 December, little happened until the 4th, when she was cruising submerged some 90 miles south of Egersund. At 13:30 First Lieutenant Maurice Wykeham-Martin, who had the watch, called Bickford to the control room, having sighted in the periscope what he believed was a U-boat. Shortly after, the Asdic officer reported hydrophone effects on the same bearing. They had stumbled across *U36* under the command of Korvettenkapitän Wilhelm Fröhlich, on her way into the North Sea. Bickford made an instant decision:

> On going to the periscope, I found the U-boat to be steering approximately 350 degrees, evidently on passage outward bound. I was a long way off track and closed her at full speed and eventually fired at 5,000 yard on 110 degrees track, the salvo being spread at seven-second intervals, torpedoes being set at eight feet. At least one torpedo broke surface and much disturbance was visible on the surface on firing. I lost trim temporarily but regained it in time to be at periscope depth before my shot could have taken effect. I saw her through the periscope blown to small fragments which rose at least 200 feet into the air. I surfaced to pick up survivors but found nothing but oil, wreckage, one dead body and a lifebelt. Bubbles continued to come up from the bottom for some time. Many volunteered to swim out through the oil to retrieve the lifebelt as a memento. I considered this unnecessary and, fearing aircraft and the possible presence of another U-boat, I dived once clear of the oil patch.[35]

Forty German sailors had found an immediate and violent death. This was the first U-boat sunk by a submarine after seven unsuccessful attempts and the expenditure of at least twenty-two torpedoes.



Salmon, May 1935. (W&L)

Nine days later, at dawn on 12 December, still on patrol in the same area, the huge liner *Bremen* crossed the path of *Salmon*, but Bickford decided to let her go even if she was camouflaged and under escort by aircraft. 'I nearly died of temptation to fire at her,' Bickford later told his friend Bill King, the captain of *Snapper*. 'I guessed she must be carrying troops and I itched to torpedo her.'[36] Bickford could not get *Salmon* into position without surfacing, however, and as there were German aircraft above, he had to let her go. Still, *Salmon*'s patrol was far from over. During the day, Bickford steered west, towards Great Fisher Bank, where U-boats had lately been observed.

In the morning of the 13th, the German light cruisers *Köln, Leipzig* and *Nürnberg* under the command of Konteradmiral Lütjens met up with the destroyers *Künne, Ihn, Steinbrinck, Beitzen* and *Heinemann* north of Heligoland. The destroyers were on their way home from a mine-laying sortie off Newcastle-upon-Tyne. Just as the two groups met, they were sighted from *Salmon*. The distance was large, over 11,000 yards, and Lieutenant Commander Bickford identified the ships as German capital ships and cruisers, rather than light cruisers and destroyers. With some eagerness, he took his submarine closer for an attack.

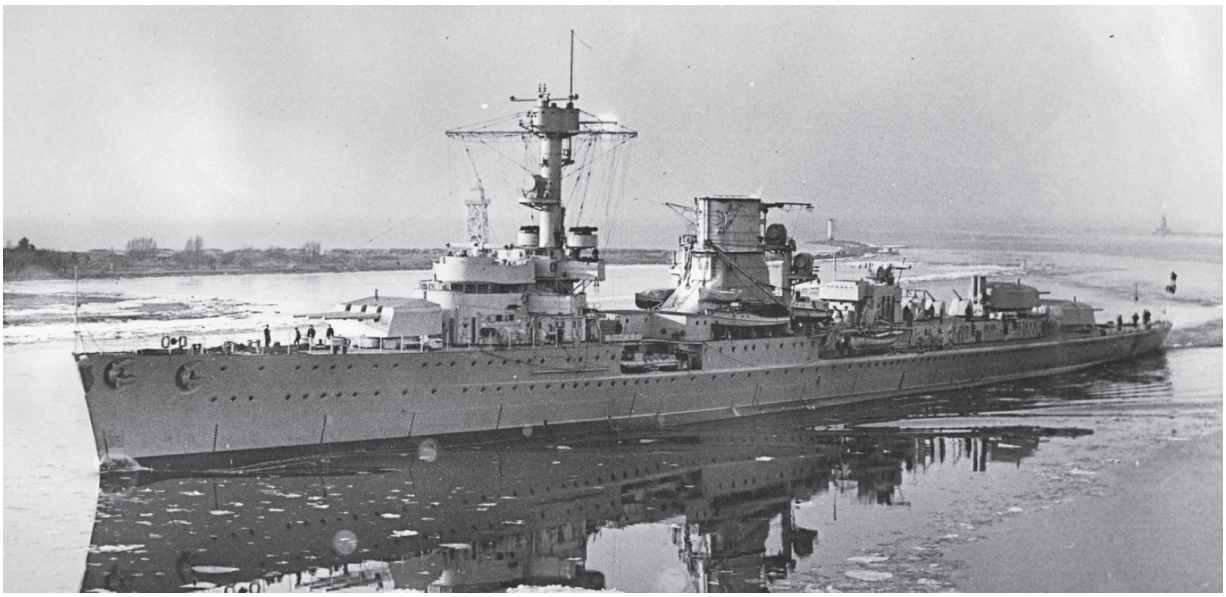
10:36. Fired spread salvo at the two rear ships, the salvo being spread at eleven-second firing intervals. At this moment *Leipzig* was on a 90 degrees track, range 5,000 yards, and *Hipper* [actually *Nürnberg*] appeared slightly out of station on the starboard quarter of *Leipzig*. I gave their speed as twenty knots, but on further consideration I now think that was under-estimation. I fired a spread salvo with point of aim just ahead of *Leipzig*'s bow with the object of winging two ships rather than sinking one, hoping thus to provoke a fleet action. Went deep and altered course to 90 degrees from firing course at full speed. 10:40. Heard a loud explosion and said, 'that is the *Leipzig*'. 10:41. Heard two loud explosions which were either hits on the third ship or the commencement of depth charging. Until this moment I had been attempting to regain trim for a periscope observation, being very heavy forward after firing (I had flooded 'A' to keep her down). Now, however, I considered it unwise to return to periscope depth as I was still not under slow speed control. So I continued at full speed. 10:46. Heard three explosions which were considered to be remainder of the salvo hitting the bottom. […] 10:50. Took evasive action. […] *Salmon* was subsequently depth-charged until noon.[37]

Some of the depth-charges were close, but no damage was inflicted. After a few hours, things grew quiet and, when *Salmon* was back at periscope depth shortly before 15:00, the sea was empty. Reports were duly submitted and after dark Bickford set course back to the area where the torpedoes had been fired to search for wreckage. Finding nothing but a large patch of oil, he ordered 'splice the mainbrace' and, with no torpedoes left, eventually set course for home.[38]

In fact, two of the cruisers had been hit. *Leipzig* was hit amidships, resulting in fifteen dead and numerous wounded, while *Nürnberg* had taken a torpedo in the bow. Both cruisers managed to limp home, but went straight for the yards, where they would stay for a long time. In fact, *Leipzig* would never become fully operational again and ended up as a training ship in the Baltic.[39]

The next day, Lieutenant Commander Phillips on patrol with *Ursula* off Heligoland sighted the damaged *Nürnberg* with escort:

> At 11:15 sighted *Köln*-class cruiser and six destroyers. *Ursula* was ahead of the leading ship of the port column. It was not certain at first whether *Ursula* was immediately ahead of the enemy or astern, and course was altered towards the formation. […] Getting dangerously close to the leading destroyer I went to 50 feet and turned in under her on to the firing course. At this stage of the attack, the Asdic was invaluable as it indicated that the turn had to be made quicker than was anticipated […] to get an accurately aimed shot instead of firing on the swing. At 11:31 fired 4 torpedoes at 6 seconds interval, range 1200. […] 1 minute 10 seconds after firing a tremendous explosion occurred, followed 6 seconds later by another even heavier. […] This explosion broke electric lights in the submarine and hydrophone effects from the target stopped immediately and was succeeded by various noises described by the operator as 'like nothing he had ever heard in his life'.[40]



Cruiser *Leipzig* in Swinemünde in the mid-1930s. (Author's collection)

Unknown to Phillips, the torpedoes had all missed the cruiser, but sank the starboard escort *F9*, which took 120 men with her when she went down in very short time. There were only fifteen survivors. After firing, Phillips dived to 65 feet and brazenly maintained *Ursula* moving at slow speed towards the last position of the cruiser. This seems to have outsmarted the destroyers *Beitzen* and *Heinemann* sent to search for her, as they never gained contact. Later, Lütjens strongly criticised both the destroyers and the escort forces for their anti-submarine tactics, claiming they were not up to their task.[41]

Both Bickford and Phillips were awarded the Distinguished Service Order (DSO) and promoted to commanders, while *Salmon*'s First Lieutenant Wykeham-Martin was awarded the Distinguished Service Cross (DSC). Churchill was most enthusiastic and invited Bickford to London for lunch to hear his story first-hand. After the meeting, the First Lord suggested Bickford should spend some time ashore, both to let officers of the Admiralty benefit from his experiences and to give him and his crew a rest. Nevertheless, when *Salmon* left for her next patrol on 4 July, having completed repairs, Bickford was on the bridge. The route towards the patrol area off south-west Norway took her across a minefield unknown to the British at the time. Nothing was ever heard from *Salmon* and she was declared overdue on 16 July.[42]

Something Less than God

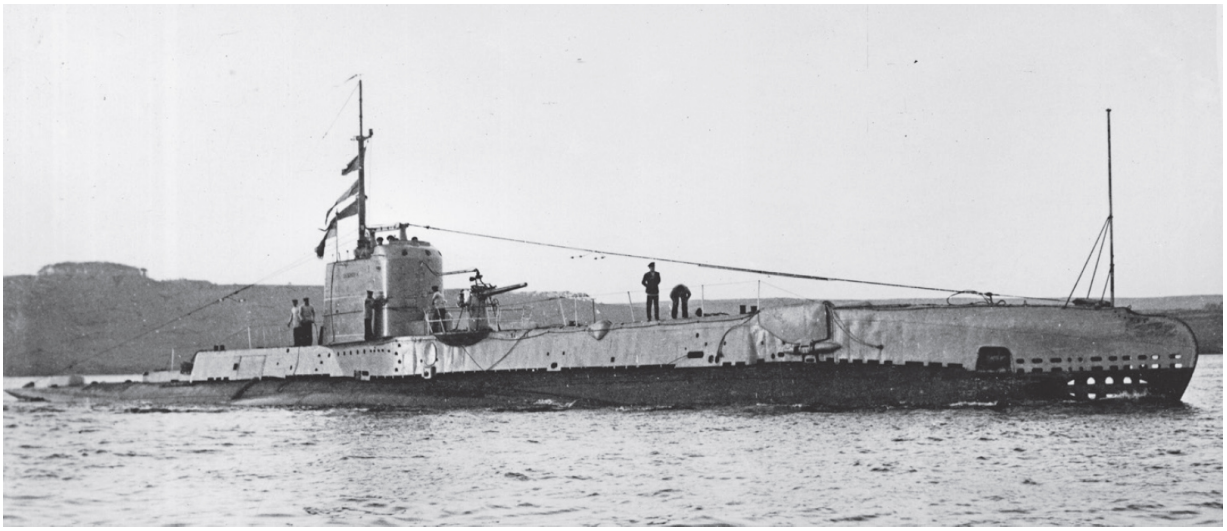
Churchill never had a good rapport with Rear Admiral Watson, and on 9 January 1940, Vice Admiral Max Kennedy Horton was appointed Vice Admiral Submarines – VA(S). The post of Flag Officer Submarines was normally held by a Rear Admiral, but a new Admiralty regulation that the post should be held by an officer who had served in submarines in WWI limited the choice substantially.[43] Horton was only too happy to be back,

provided he was given the ‘free hand’ that was promised him by Admiral Pound.[44]

Max Horton was a complex man: ruthless, uncaring and blunt to the point of rudeness. Yet he had proven his worth as a submarine commander, and his unquestionable courage and competence created confidence in most of those who served under him. Honest mistakes were tolerated if confessed to immediately, but woe betide any subordinate who was guilty of neglect of duty or trying to bluff a higher competence than acquired. Commander Denys Rayner of the corvette *Verbena* wrote:

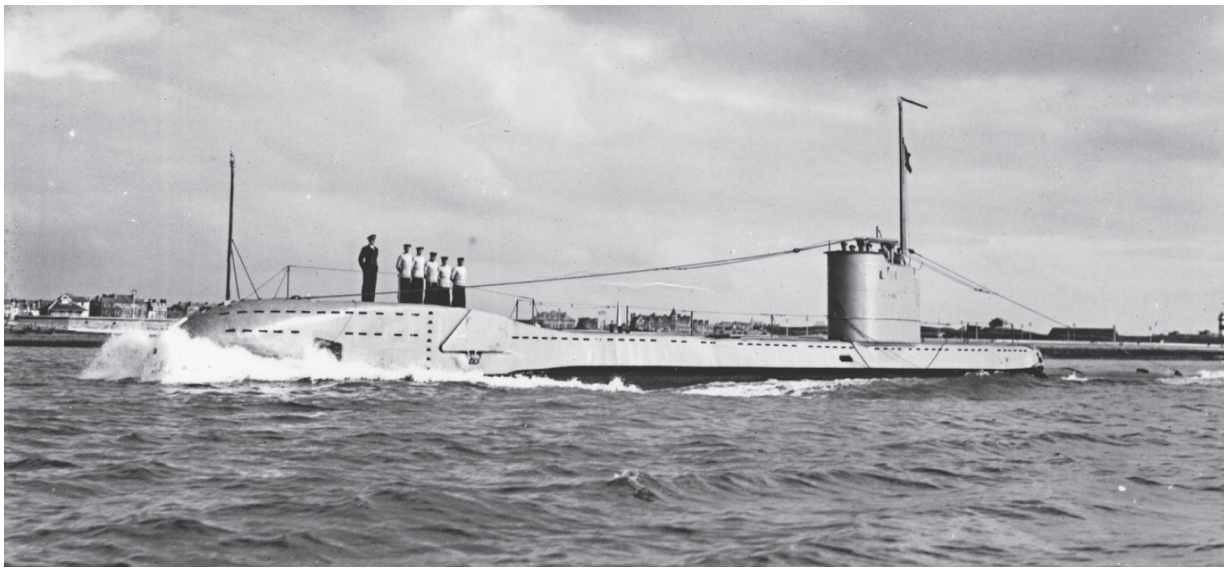
> Horton’s own staff regarded him as something less than God but more than Man. If they had not done so they would have found themselves relieved. He had more personal charm than any man I ever met, but he could be unbelievably cruel to those who fell by the wayside.[45]

Horton’s arrival at Aberdour coincided with one of the worst disasters of the British Submarine Command in the first part of the war and a major success for the German anti-submarine forces. The submarines *Seahorse, Undine* and *Starfish* had all sailed at the end of December or beginning of January to patrol in the Horns Reef–Heligoland Bight area.



Seahorse. (Abrahams)

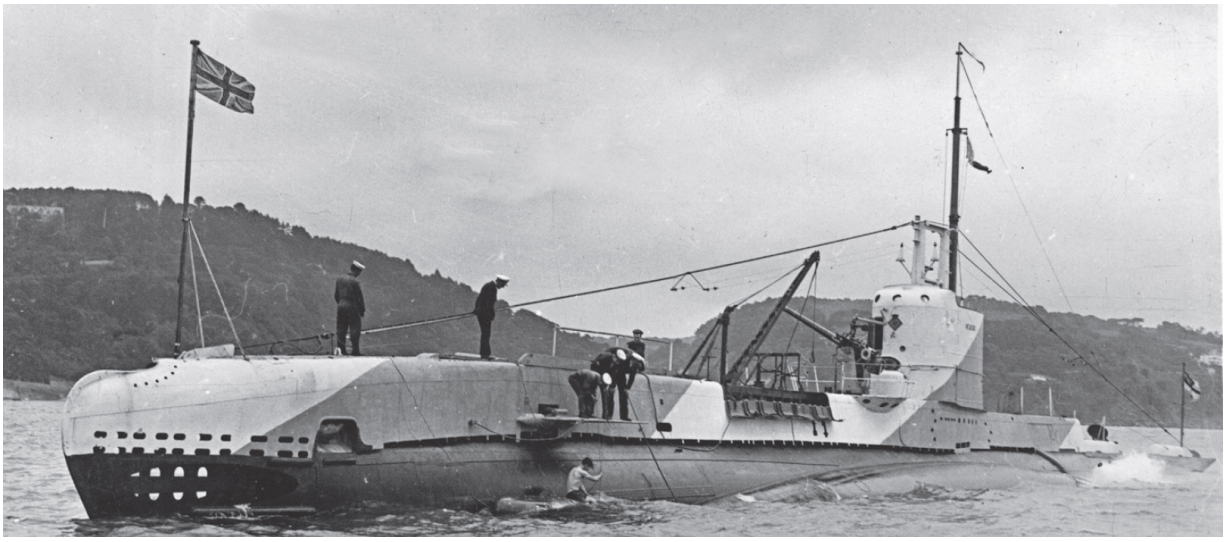
At 13:18 on 7 January 1940, ships of the German 1st Minesweeper Flotilla sighted a submarine on the surface some 20 miles west of Heligoland. By the time the first ships arrived over the location, the submarine had dived, but nine depth-charges were dropped. No effects were seen on surface, but as noises were heard through the hydrophones, a buoy was dropped to mark the centre of the search area. A dozen more depth-charges were thrown, after which no more contacts were obtained. No evidence of the submarine having been sunk was observed, and the German ships continued to search the area. During the afternoon, a heavy fog set in and while one minesweeper was left behind at anchor during the night, the other ships returned to Wilhelmshaven. Unknown to the German minesweepers, they had attacked and damaged *Seahorse* under the command of Lieutenant Dennis Massy-Dawson. It was initially believed that *Seahorse* was actually sunk by the minesweepers of 1st Flotilla, but her wreck was discovered off the Danish coast and it is most likely that she got away on that occasion, only to venture into a minefield shortly after. Five officers and thirty-four ratings were lost.[46]



Undine, November 1938. (W&L)

Taking his submarine *Undine* on her fourth war patrol in December 1939, Lieutenant Commander Alan Jackson found, while some 20 miles west of Heligoland, that her Asdic did not function properly. The dome in which it was contained had flooded.[47] Before any decisions could be made whether to return or continue the patrol, at 09:50 on 7 January, two German minesweeping trawlers were sighted. Jackson immediately prepared for an attack.[48] In fact there were three minesweepers: *M1201, M1204* and *M1207* of the 12th Minesweeper Flotilla. Jackson moved *Undine* into position and fired one torpedo at the leading trawler, but missed astern by a few yards, having underestimated the speed. Retaliation was swift, and minutes later there were several explosion as the minesweepers threw their depth-charges. *Undine* was in less than 100 feet of water, creeping away some 60 feet below the surface, blind due to the loss of the Asdic. After a while, the attacks stopped and Jackson started to hope he might have escaped:

A period of complete quiet followed for about five minutes. Thinking there might be a possibility of attacking again or that the enemy had broken off the hunt, I returned to periscope depth and raised the Low Power Periscope, to look directly at a trawler on the starboard beam, so close that I could see only her port side from the bridge to the aft end of the engine room casing. I immediately ordered 'Down periscope, 60 feet', but before the submarine had really started to go down there were three violent explosions, one aft, one forward and another. (I was informed recently by Leading Telegraph Monserrat that he heard a noise on the port side of the Control Room which sounded like a depth-charge scraping the pressure hull, but I have no personal recollection of this.) The submarine was blown upwards, some lights and glass broken, there was a steady leak in the engine room from near the hatch, a leak in the galley and I was later informed that the Fore End had flooded and had to be abandoned. Both sets of hydroplanes were reported out of action, (the fore hydroplanes hard-a-rise) but the after hydroplanes appeared to be working. I ordered 'Take her down, flood 0' but the submarine continued to rise until the periscope standards broke surface, giving many of the crew the impression that the drop keel had fallen off. I therefore raised the Low Power Periscope and saw a trawler bows on the starboard beam at a range of approximately half a mile. Considering that it was impossible to get the submarine down again to a safe depth before being rammed, I ordered 'Surface, burn the [Confidential Books], prepare the charge' and went to the bridge, followed by the Leading Signalman who acting on my orders, waved the Negative Flag, which was the best substitute for a white flag available.[49]



Starfish, July 1937. Trials with camouflage paint were abandoned, as the submarines were rarely on the surface during daylight under operational conditions. (R Perkins)

Even though the German gunners continued to fire enthusiastically, a short time after the flag of surrender had been shown, all the crew were able to escape and were rescued from the freezing cold waters. First Lieutenant Mike Harvey opened the main vents before he abandoned ship as the scuttling charges were not accessible due to the flooding. Sinking was slow, however, and *M1201* managed to get a towing hawser on board, sending some men below to try to stop the engines and close the vents and hatches. The first man going below was driven up again due to gas leaking from the batteries, without achieving anything. Before gas masks could be brought, *Undine* sank. Jackson and his crew spent the rest of the war in prison camps.[50]

German Type 1935 minesweepers. *M7* is just inbound of *M8*. Except for minor details, the vessels were almost identical. These ships were very manoeuvrable and efficient submarine hunters. (Author's collection)

The third submarine lost in this dramatic period was *Starfish*, which Lieutenant Thomas Turner took to sea from Blyth on 5 January. At 09:30 on 9 January, west of Heligoland, she sighted and attacked what was believed to be a German destroyer. The attack failed due to faulty drill and the torpedoes remained in the tubes. A second attack was prepared, but before this could be effectuated, the target, the minesweeper *M7*, had detected *Starfish* on the S–Gerät and seen its periscope and attacked.

Running over the position of the submarine, two depth-charges were dropped. Due to a miscommunication the throwers were not fired. The S-Gerät operator reported that he still had the echo and three buoys were dropped to mark the site. At 11:40 [German time] six depth-charges were dropped in a second attack. No result observed. At 12:56, two more charges were dropped inside the marked area. After this, the increasing state of the sea limited the use of the S-Gerät.[51]

The explosions from the two first depth-charges cut the power to both *Starfish*'s hydroplanes and Turner stopped the engines and let his boat sink to the bottom to see if they could be repaired. The water depth was 90 feet.

Turner had successfully escaped depth-charges before and considered the best tactic to be under way in order to evade further attacks. Hence, when the electrician asked for permission to restart the Sperry motor to prevent the gyro from wandering, permission was given. Shortly after, several depth-charges exploded fairly close, causing widespread damage. Turner assumed the noise from the motor was giving *Starfish*'s position away and decided to remain on the bottom in silence, apparently not realising that by doing so he remained inside the area *M7* had marked with buoys. Oberleutnant Heinrich Timm waited patiently above, attacking at times when the S-Gerät ascertained that the boat was still there. At around 15:00, a series of charges exploded fairly close to the submarine, shearing rivets and cracking plates. Several leaks developed and air bubbles were observed on the surface, pinpointing its location. Several new buoys were dropped, this time with light, as daylight was fading.

By 18:00, the situation inside *Starfish* had become serious. Both torpedo trenches and bilges were nearly full, while water was lapping the starboard main motor casing. Even if the engines might still work, the chances of *Starfish* escaping were dwindling by the minute. The German vessel was not likely to leave and Turner considered the chances of getting away very slim. At 18:20, he gave the order to surface. Above, *M5* had come to the assistance of *M7* and both minesweepers opened fire with their machine guns as soon as *Starfish* surfaced. Sneaking away on the surface was not possible, and orders to abandon and scuttle the boat were given. Immediately a white flag was raised, the fire was stopped. A dozen men who had jumped into the water were picked up by the buoy boat while *M7* came alongside *Starfish*, taking the rest directly on board. The submarine sank before it was possible for any of the Germans to get below.[52]

The loss of the three boats naturally caused deep concern in the Submarine Command. For a while, there was fear that some new weapons system had been adopted or a kind of trap had been instigated. In fact, though, both *Undine* and *Starfish* were lost from a combination of inexperience and foolhardy attacks on manoeuvrable A/S vessels in shallow waters. The only new element was the German A/S tactic of stopping and listening, confusing the submarine captains, who were used to different tactics when exercising with British vessels. The German hydrophones and echo-detection sets worked best when the ships were stopped or moving at very slow speed. Early in the war, only a limited number of vessels in each flotilla had been equipped with hydrophones, and they gave instructions to the others. The German echo-sounding system was more primitive than the British Asdic, but technically complicated and sensitive to water conditions. It was generally used for direction and ranging purposes after contact had been obtained through hydrophones. In addition, it needed to be shut off at intervals to reset.

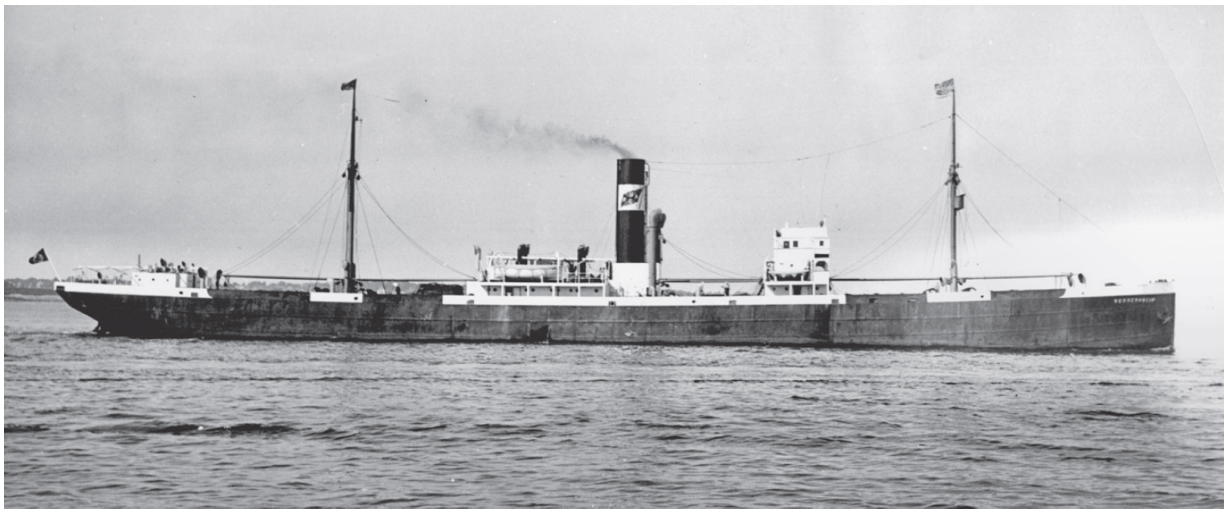
As a consequence of the losses in January, the patrols in the western Skagerrak, off the Dutch coast, and to the west of the Westwall were strengthened, while those to the east of the German declared area were suspended for the time being. Later, with the increased German use of aircraft in the search for the submarines, it became more difficult to operate in the Skagerrak and the southern North Sea. Off the coast of Norway the sea was generally less smooth and easier to hide beneath, but as summer approached the days would lengthen and there would be serious limitations on the time to charge batteries and move on the surface.[53]

Meanwhile, Horton initiated a major shake-up of the senior personnel of the Submarine Arm. Captain Stephens of the 2nd Flotilla was unceremoniously replaced by Captain George Menzies at the end of January, while some twenty commanding officers were moved from their boats to other jobs. Horton made up his mind regarding a subordinate in minutes, and unless the opinion was favourable, he ruthlessly replaced those he considered inept for the job at hand. The vacant spaces were filled by younger men who were waiting in the wings as there had been no boats available for them after the qualifying course.[54] At the end of March, Horton moved his headquarters from Aberdour to Northways in Hampstead –'far enough from the Admiralty to give him a free hand, and close enough for day-to-day contact with the Naval Staff' as well as Coastal Command.[55] The Submarine Staff was moved from Gosport, initiating a very efficient HQ for the service.

Things were rather quiet for the Allied submarines in February, largely as the ice conditions along the North Sea coasts kept most vessels in harbour for several weeks. During March things picked up again and, on the 21st, *Ursula* intercepted and sank the 4,947-ton German ore ship *Heddernheim* north-east of Skagen.[56] Two days later, on the 23rd, Lieutenant Commander Hutchinson in *Truant* sank the 2,189-ton German freighter *Edmund Hugo Stinnes IV* off Bovbjerg Lighthouse: inside Danish

territorial limits. *Stinnes* was on her way to Copenhagen with a cargo of coke when she was intercepted. *Truant* had stalked her for a while from outside the territorial limit when, according to Lieutenant Commander Hutchinson:

> At 23:00, the ship altered course to 190º and thereby came outside territorial waters. No attempt to close was yet made owing to the proximity to Bovbjerg. It was desired to stop her in a position where coastguards would not be watching and reporting the proceedings. At 23:30, after a careful fix had been taken, the ship was found to be ½ mile outside territorial waters. She was closed at speed [and] a 6-inch Aldis lamp was switched onto her stern. Ship's name with Hamburg port of Registry was read and Nazi ensign sighted. Signal was made in English: *Stop, do not radio*. Ship proceeded and did not answer. One blank round was fired, followed by a repetition of the above signal and *Send boat*. The German then altered course towards land […] increasing speed.[57]



The 4,947-ton *Heddernheim* was torpedoed by *Ursula* on 21 March 1940 off Skagen – the first German merchant ship to be sunk by a British submarine in WWII. (Author's collection)

When the radio room reported SOS signals in German, Hutchinson ordered two live rounds to be fired into *Stinnes*'s bridge structure. The signalling did not stop, and three more rounds were fired, all finding their mark. By this time, *Edmund Hugo Stinnes* was undoubtedly inside Danish territorial waters. Eventually heaving to, the crew took to the boats and a short while later, the freighter was seen to list and settle. According to Hutchinson, *Stinnes* was outside territorial waters when first challenged by *Truant* and scuttled herself only after escaping inside. That might be the case, but Hutchinson admits that by the time the last shots were fired, she was inside Danish territorial waters – as she undoubtedly also was when he fired two torpedoes into her to expedite the sinking. The master, Kapitän Albert Weiss, was taken prisoner on board *Truant* before she headed off. The rest of the crew was safe in the lifeboats, close to land. A Danish protest was delivered during the first days of April requesting the prisoners be repatriated and compensation paid, but the event was shortly after overshadowed by the German invasion.[58]

Result Unconfirmed

In early 1940, as ice conditions gradually slackened, Vice Admiral Horton focused the majority of his boats in the North Sea, Skagerrak and Kattegat. As one of a few in the British naval command, Horton was convinced Allied intervention in Norway would bring immediate German countermeasures, and during March he started concentrating his boats along the Norwegian coast. Having been informed of pending operations in Norway, he summoned his flotilla captains to a meeting at Northways on 1 April. Orders were given for all available submarines to be at sea by dawn on the 5th, covering the exits from the Bight, Kattegat and Skagerrak as well as likely German landing points in southern Norway. German warships could be attacked but otherwise the boats should conceal their presence as much as possible. Merchant ships should be left alone unless German

warships and transports were encountered together, in which case it would be most important to attack the transports. Lieutenant Commander Bryant of *Sealion* found this order challenging and wrote in his diary on the 7th:

> Some 25 merchant vessels were sighted during the day, mostly northbound. Some were suspicious, but none that I could say definitely were German transports […]. One small ship marked Estonia had a funnel corresponding to that of Saaberk Co of Hamburg. Five ships had no flags or markings, three being greyish. It was not possible to surface and investigate them so no action was taken. I was much concerned that I might be letting enemy ships by owing to taking no action. On the other hand, orders received conveyed the impression that it was essential not to compromise my position. The definition of a 'transport' was not clear in my mind.[59]

Due to improved signal discipline, German signals intelligence (sigint) had problems tracking the Allied submarines compared to a few weeks earlier and was largely unaware of the Allied numbers and whereabouts. Except for *Trident*, which stopped and examined several neutral merchant ships off Lista during the last week of March and first week of April, and *Unity*, which had made an unsuccessful attack on a U-boat in the Heligoland Bight on the 5th, there had been few indications of where the submarines were hiding. Based on the amount of land-based radio traffic, the B-Dienst estimated that some fifteen to twenty submarines were at sea. This number worried the SKL, as it might indicate that the Admiralty was aware of Operation Weserübung and preparing a trap. On the other hand, it might be that the large number of submarines was a defensive measure for their own operation against Norway, as in March. Either way, the submarine alert was heightened and preparation for increased air and sea protection of the transfer convoys was ordered.[60]

At the time of the conference, *Triton* and *Swordfish* were off Skagen and *Trident* off Arendal. During the next few days, *Sealion, Sunfish, Unity* and the Polish *Orzeł* took to sea to join them. *Narwhal* also sailed on the 2nd to lay around fifty mines north-west of Heligoland, where there was believed to be an opening in the German minefield. In the evening of the 4th, Horton moved some of the boats deeper into the sea lanes: *Orzeł* east of

Lindesnes, *Trident* off Larvik, *Sunfish, Triton* and *Sealion* into the Kattegat. The boats received orders not to compromise their position by intercepting merchant vessels, but to focus on warships.

By midday on 7 April, receiving information that a German fleet was at sea, Horton had no doubts that a German intervention was developing. He ordered all remaining boats to sea with utmost despatch, bringing the number of submarines at sea up to twenty, including two French boats. The next day, he discussed his dispositions with the Admiralty and to his surprise received instructions to withdraw the boats off Norway and redeploy them to a line in the North Sea, south of Stavanger, intercepting German naval forces heading home to bases in the Heligoland Bight. Before these instructions could be put into force, however, reports were received from Oslo that the German freighter *Rio de Janeiro* had been sunk east of Kristiansand and that German soldiers were being rescued. Horton took this to mean that he had been right all along and made only minor adjustments to his dispositions, instead of the major realignment directed by the Admiralty. By the morning of 9 April, there were more than twenty British, Polish and French submarines on patrol in the Kattegat, the Skagerrak or the eastern North Sea. Horton's measures were so effective that some fifteen German transports and supply ships were sunk or severely damaged between 8 and 29 April, in addition to half a dozen warships. This caused a crisis in the OKW and the plans for moving troops and supplies to southern and western Norway had to be completely revised, diverting significant resources from other tasks to anti-submarine patrols.

At 04:24 on 9 April, the British Admiralty issued a signal indicating that ports in south and west Norway were being invaded by German naval forces. Until this time, the submarines had only been allowed to attack 'enemy warships and transports'. Identifying which of the large numbers of merchant ships in the Kattegat and Skagerrak were German or indeed transports was no easy task, especially as escorts and air patrols precluded

any attempt at surface interception. In the late morning of the 9th, the War Cabinet, after heavy pressure from VA(S), approved that all German merchant vessels in the Skagerrak east of 8º E, or east of the German declared area, could be treated as warships and sunk without warning. This order was forwarded to all boats at 13:24. While the signal was decoded on board *Sunfish*, Lieutenant Commander Jack Slaughter was focusing his periscope onto the 7,129-ton *Amasis*, outside Swedish territorial waters off Lysekil. 'Just as the sights came on', he later wrote in his report, 'the last part of VA(S)'s 1324/9 was read out to me, so I fired.' One torpedo hit, and *Amasis* sank rapidly, opening a series of successful actions by the Allied submarines, completely different from the preceding period.[61]

During the morning of the 9th, a signal was made for Lieutenant Commander Wilfrid Haselfoot of *Thistle* to enter Stavanger harbour at his discretion and attack German ships there. Haselfoot, who had taken over command of *Thistle* two months earlier and was on his second patrol, reported back just after midday that he was steering for the fjord, expecting to enter the harbour at nightfall. Instead, a new signal arrived at 21:30: 'Expended six torpedoes on inward bound U-boat at entrance to Stavanger Fjord at 16:04. Result unconfirmed due to enemy air activity. Intend to carry out orders of 1249/9 tomorrow Wednesday with remaining two warheads, air activity permitting.'[62]

This was the last ever heard from *Thistle* and, except for a brief statement on German radio that a submarine had been sunk, her fate remained a mystery until after the war. The U-boat fired at was *U4*, returned to active service from a training unit in March to meet the needs for extra boats during Operation Weserübung. At 17:05, torpedo tracks were seen off the port quarter. Swift evasive action in turning away from the tracks saved *U4*, the nearest of *Thistle*'s torpedoes passing less than 10 yards ahead. At least three more torpedoes were heard by the sonar operator. Oberleutnant Hans-Peter Hinsch did not appreciate being attacked at all and, taking *U4*

down, he searched around for the perpetrator, occasionally hearing ‘electric engine noises’, indicating he was around. Hinsch resurfaced at 22:17 and kept searching, pulling further out to sea to get away from the dark background of the coast. At 01:57 he sighted:

> a submarine ahead to the right, too close for me to fire immediately. Go right, course 140º. We turn to starboard with both engines at 4/5 speed to get the enemy straight aft. Tubes I and III are made ready. After some 600 metres, I turn back to a reciprocal course. Enemy seems to have stopped. First torpedo (G7a) is fired as a straight shot. Observing the wake of bubbles, I see that the enemy’s bows are shifting to starboard and that she is actually still slightly under way. The first torpedo misses. Immediately fire second torpedo (G7e) from around 400 metres, allowing for speed of 5 knots, direction 70º. Hit amidships. Huge patch of oil and heavy smell. In the darkness we find nothing to retrieve.[63]

For some reason, the crew of *Thistle* had been taken off guard and earned the dubious distinction of becoming the first Allied submarine to be sunk by a U-boat.[64]

— 16 —
Air War at Sea

Cloud Base 500 Feet

CHURCHILL WAS LATER TO write, 'In common with prevailing Admiralty belief before the war, I did not sufficiently measure the danger to, or the consequent deterrent upon British warships from air attack.'[1]

In 1936, Coastal Command was given an autonomous position within the RAF with its own Commander-in Chief. Its role was defined as a reconnaissance and surveillance force, behind Bomber and Fighter Commands, having to make do with scant resources and obsolete aircraft. Two tasks were given focus: A/S reconnaissance around the coasts of Britain and patrols of the North Sea in search of surface raiders. The potential of Coastal Command as a maritime strike force was dismissed – that task was to be taken care of by Bomber Command.

At the outbreak of war, Coastal Command had just short of three hundred operational aircraft in Britain. These were set up in five flying-boat squadrons, eleven reconnaissance squadrons and two torpedo bomber squadrons.[2] The ability of the command's aircraft to find, track and attack U-boats was all but non-existent in the first part of the war, not least because the available A/S bombs were all but useless, even in the rare case of a direct hit.[3]

In September 1939, Coastal Command HQ was at Northwood outside London while the available aircraft were organised in three groups: 15th Group with headquarters at Plymouth, responsible for coverage of the Western Approaches; 16th Group at Gillingham in Kent, covering the

eastern Channel and southern North Sea; and 18th Group at Donibristle in Fife, covering the North Sea. The latter was given priority and the majority of the Coastal Command squadrons were deployed in Scotland. To ensure cooperation with the Royal Navy, Area Combined Headquarters (ACHQ) was established adjacent to several of the main naval bases just before the war, the ACHQ at Rosyth being the most important.

From the start, a system of reconnaissance patrols was set up between Scotland and the south-west coast of Norway. The key part was a blocking patrol from Montrose, north of Edinburgh, to Obrestad, south of Stavanger. This was to be flown during daylight hours as an endless chain of flights, making sure no German raiders or merchant ships slipped into the Norwegian Sea. Supplemented by parallel lines north and south flown less frequently, it was assumed that any ship passing the main patrol line during darkness or poor weather would be caught by one of the supplementary lines the following day. The so-called Obrestad Line was activated from 24 August 1939 by 269 and 233 Squadrons. Both squadrons were equipped with Avro Ansons, though, and these did not have the range to reach the Norwegian territorial border. A gap of some 50 miles remained, to be covered by submarines.

The patrol lines to the north of the Obrestad Line proper were flown by London flying boats of 201 Squadron based at Sullom Voe in Shetland (A–D lines) and by London and Stranraer flying boats of 240 and 209 Squadrons at Invergordon (E–K lines). Both these aircraft were obsolete and unsuited for such operations. Patrol lines to the south of the Obrestad Line (P–T lines) were flown by Ansons from 224 and 269 Squadron operating from Leuchars and Montrose, while flying boats of 210 Squadron covered the Danish coast (see map).[4]

The task of patrolling such a vast area had been considerably under-estimated. The network was too loose, and time and again German ships were able to slip through under cover of poor weather and increasingly

long, dark winter nights. In addition, German civilian ships had the advantage of using Norwegian and Danish territorial waters. No suitable British alternative to the Anson emerged in the late 1930s and the American Lockheed Super Electra was eventually chosen as its replacement. This was a civilian aircraft, redesigned to British specifications and renamed Hudson. In June 1938, 250 aircraft were ordered, later increased to 350. Although not ideal in an anti-shipping role, the Hudson was robust and could carry a bomb load of up to 1,000 pounds. Above all, it had a range to cover a large part of the North Sea, including south-west Norway, from bases in Scotland. Only 224 Squadron was operational in early September 1939, but during the autumn and winter, the number of Hudsons steadily increased, enhancing the naval reconnaissance capacity significantly.[5] In addition, the excellent, long-range Short Sunderland flying boat was coming into service with 210, 228 and 204 Squadrons, slowly replacing older models and giving a vastly improved service, particularly to the north.

On 20 September, the Hudsons of 224 Squadron at Leuchars took over the Obrestad Line, releasing the submarines. At the same time, the main patrol was modified to a chain of aircraft flying from Girdleness near Aberdeen at 07:30, 08:30, 11:30 and 12:30 to a point some 6 miles off Karmøy between Stavanger and Haugesund. From time to time, the turning point of the patrol was moved north to Utsira or south to Lista due to earlier U-boat sightings, to avoid known German reconnaissance flights or due to weather conditions. As the capacity increased, additional patrol lines were added between the Orkneys and the Faeroes, and the Orkneys and Shetland, keeping an eye on the merchant traffic north of the Scottish mainland and searching for U-boats.[6] During November, 220 and 233 Squadrons also converted from Ansons to Hudsons, and the patrols could include parts of the Skagerrak and the southern North Sea.

Approximately 9,000 hours were flown by the Coastal Command aircraft over the North Sea up to the end of December 1939. Long-range

patrols over the sea were dangerous, not least as weather deteriorated into the winter, and there was always the risk of running into German counterparts. The first encounter between a Hudson of 224 Squadron and a Do18 flying boat occurred over the North Sea in the morning of 4 September. Both aircraft returned safely home on that day and it would be 8 October before the first Dornier was shot down by Flight Lieutenant A Womersley some 20 miles off Aberdeen.[7] On the next day, Coastal Command HQ issued orders that every opportunity for attacking German aircraft should be taken. To enhance the offensiveness, long-range reconnaissance patrols in the Heligoland Bight and the Skagerrak were flown by so-called 'battle flights', usually three Hudsons in a loose formation with the express objective of seeking out and destroying German reconnaissance planes. The concept was tested by 224 Squadron during the second half of September and the other squadrons followed suit as soon as the conversions to Hudsons were concluded.

In late October, six Blenheim long-range fighters arrived at Leuchars, making up a separate flight of 233 Squadron. By early December they were declared operational and deployed as convoy escorts, releasing Hudsons for reconnaissance missions. Later, four more Trade Protection Fighter Squadrons, 235, 236, 248 and 254, were equipped with Blenheim IV aircraft.[8] As the German air activity over Britain increased, though, these long-range fighters were also required to escort naval forces and perform standing patrols to catch intruders.

On 13 November, the HQ of Coastal Command informed all groups and squadrons that the destruction of U-boats was to be rated with equal importance to the location of surface vessels. All routine reconnaissance patrols should therefore be flown at a height deemed to give the best chance of sighting U-boats, according to prevailing weather and sea conditions. In consequence, the proportion of anti-U-boat patrols flown by 18th and 16th Groups steadily increased from November onwards, all the more so as such

reconnaissance flights also covered relevant areas for the location of German raiders and blockade breakers.[9]

A critical element in the defence of Britain was radar or radio direction finding (RDF), as it was known at the time. It consisted of a series of so-called Chain Home stations (Air Ministry experimental stations – AMES Type 1), built at key points along the British east coast. Technically, the system was inferior to the German radar, but its simplicity made it possible to deploy it with speed and, by 1939, the Chain Home stations made a virtually continuous network from Portsmouth to Shetland. The RDF was not efficient below approximately 3,300 feet and, as a second step, Chain Home Low stations (AMES Type 2), covering the airspace close to the coast and down to about 500 feet, were set up in prioritised areas.[10]

The Chain Home RDF radars could with some reliability determine distance and direction of incoming aircraft and, with lesser accuracy, the angle of elevation, which gave an estimate of the height. With experience, skilled operators could also give a fair estimate of the number of aircraft approaching from the shape of the displayed signal. The information obtained from the cathode-ray tubes was plotted on large graphical maps and forwarded to the respective HQs of the fighter groups and sectors involved as well as naval authorities and the civil air-raid authorities. An unexpected concern, realised after the outbreak of the war, was that as the radar transmitters were fixed, pointing to sea, they could not follow the aircraft once they had crossed inland. Hence German reconnaissance flights in the early part of the war were sometimes difficult to trace over land unless there were observer corps positions along the route.

Coastal Command depended on Bomber Command to inflict damage on German surface ships. No training or exercises of naval strike missions had been carried out by either command by the outbreak of war, though, and the

crews of the Bomber Command had little if any competence in operating or navigating over the sea.

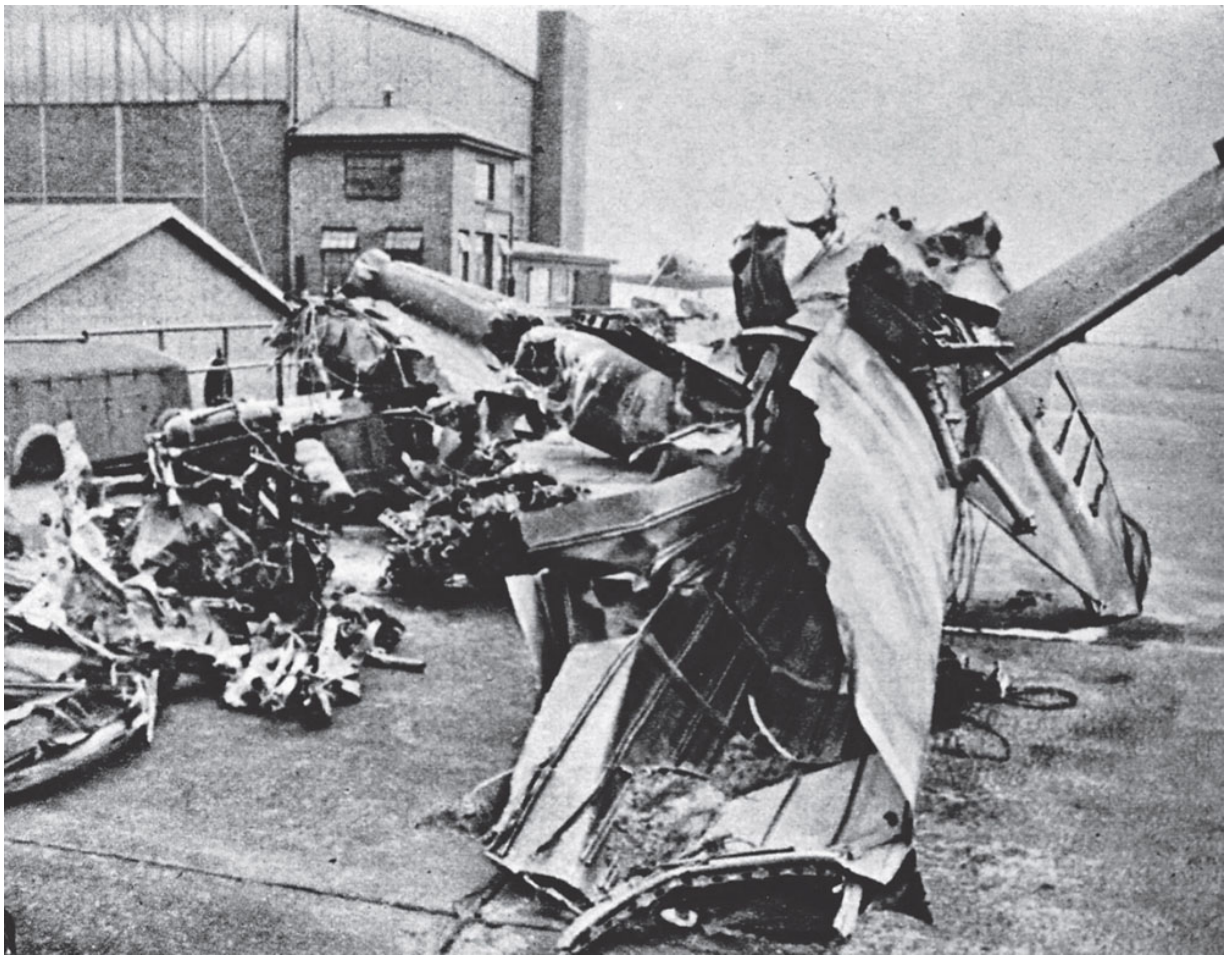
At the start of the war, the British Cabinet decided against the bombing of German land targets for fear of retaliation against Allied cities. Instead, Bomber Command, to the surprise of German military and civilians alike, covered western Germany with millions of propaganda leaflets. The only legal target for the British bombers was the Kriegsmarine, when it was not alongside in a populated harbour. Air attacks were strictly forbidden on anything but ‘warships, troopships and auxiliaries in direct attendance of the enemy fleet’ and, after a while, ‘flak vessels’ – armed auxiliaries or trawlers – in the Heligoland Bight. German merchant ships would be off limits to British aircraft until after the invasion of Norway. Pre-war plans for attacking the German fleet were brought forward, in spite of the Air Staff considering such operations a divergence from the ‘mainland offensive’ of the Bomber Command.[11]

Vickers Wellington bombers. (Author’s collection)

As early as the afternoon of 3 September, eighteen Hampdens and nine Wellingtons of Bomber Command were sent towards Schillig Roads off Wilhelmshaven, looking for German warships. They found nothing to attack before nightfall and all aircraft returned.

The next day, the 4th, a reconnaissance aircraft from 139 Squadron reported several ships, including *Scharnhorst* and *Gneisenau*, in the Elbe Estuary. Consequently, fourteen Wellingtons from 9 and 149 Squadrons were dispatched for Brunsbüttel while fifteen Blenheim bombers from 107 and 110 Squadrons headed for the Schillig Roads. Conditions were poor with low clouds and gusty rain, making the flying challenging. At Wilhelmshaven, Flight Lieutenant Doran of 110 Squadron was the first to arrive:

The weather in the Heligoland Bight was bloody and the only attack possible would be a low-level one. We could not carry torpedoes, so [we carried] 500-pound [general-purpose bombs] with 11 seconds delay fuse. […] Soon after crossing out over the North Sea we ran into the bad weather, a solid wall of cloud seemed to extend from sea-level to 17,000 feet. We obviously had to keep below it to stand any chance of finding our target. So we went down to sea-level and flew in and out of cloud between 50 and 100 feet. […] By an incredible combination of luck and judgement we were bang on our track. Within a few minutes, cloud base lifted to 500 feet and we saw a large merchant ship; just beyond it was the *Admiral Scheer*. 110 Squadron had planned to attack in two sections of three and two, hoping to get all the aircraft from each section attacking from different directions and over the target within the 11 seconds delay before the bombs exploded. […] The *Scheer* was anchored in shallow water, near the bank and protected from the landward side by a 'pin-cushion' balloon barrage. So we decided to make our attack slightly across the fore and aft line of the ship, and make our getaway by a sharp turn to port to avoid the balloon barrage which was at about 500 feet, and made our attack in a shallow dive. As we approached, we saw the matelots' washing hanging out around the stern and the crew idly standing about on deck. It seemed as though we had caught them, literally, with their pants down. However, when they realized that our intention was hostile they started running like mad, and as aircraft No. 1 came over at mast-head height and dropped its bombs bang amidships, their A/A got into action, and this together with shore-based A/A kept us pretty busy carrying out evasive measures. The bombs from the second aircraft undershot by about ten yards and exploded in shallow water directly under the ship. No. 3 […] dropped his bombs on another target.[12]



Wreckage of a Blenheim IV of 107 Squadron lost to naval A/A guns at Wilhelmshaven on 4 September 1939. In the background is more wreckage from a second Blenheim shot down north of Bremerhaven. (J Weal collection)

Time-delayed 550-lb general-purpose (GP) bombs were used and, as the aircraft came in very low, these failed to explode. Three bombs fell on or near *Scheer* but none exploded; one got stuck in the deck, another rolled underneath the railing and vanished quietly in the water, the third went down inches from the side of the hull, sending a fountain of water onto the deck. By the time the five Blenheims of 107 Squadron reached the anchorage, the German A/A gunners were well prepared and four of the five aircraft were shot down. One Blenheim crashed on the forecastle of the cruiser *Emden*, killing nine men and wounding several; the first combat casualties for the Kriegsmarine against British forces.[13]

At Brunsbüttel, one Wellington was shot down by flak while two were shot down by Bf109s of II/JG 77 from Nordholz. None of the German battleships suffered any damage. Two of the Wellingtons failed to find Brunsbüttel altogether and dropped their bombs on Esjberg in neutral Denmark, 125 miles to the north, heralding the difficulties which proved to be a consistent problem for Bomber Command navigating over the North Sea.

Conservative British officers saw the loss of seven bombers as confirmation that ships had little to fear from the air, even when at anchor, overlooking the fact that the first wave surprised the defences and got through, actually hitting *Scheer* three times. Indecision and fear of civilian casualties meant that no further attacks were mounted in October or November, and catastrophic losses during December eventually caused Bomber Command to change to nocturnal operations. For Raeder and the SKL it was an ominous sign; if the RAF could get their act together, no German anchorage would be safe.[14]

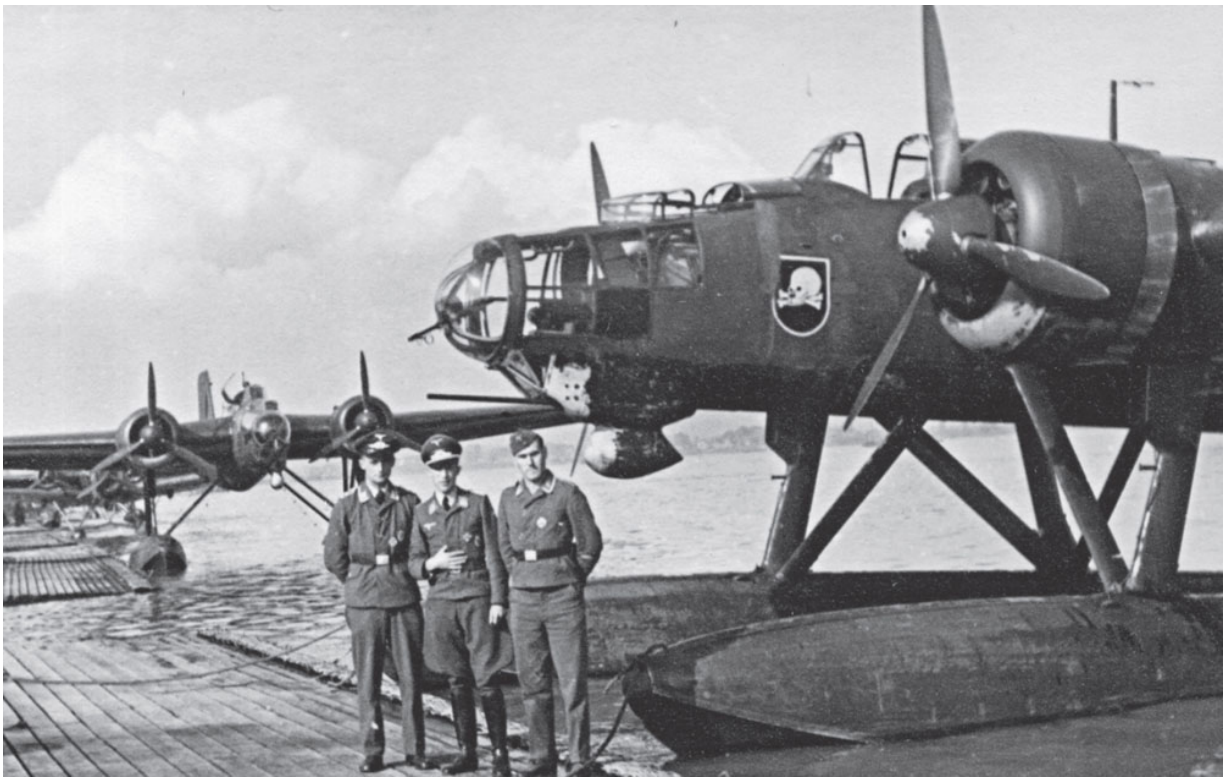
Lions and Eagles

German naval aviation was hardly in any better state than the British at the outbreak of the war, in spite of the best intentions and a strong competence

in the construction and operation of civilian flying boats.

Unlike the Royal Navy, the Kriegsmarine considered aircraft an important supplement to the surface ships' combat capabilities, performing long-range reconnaissance and mine-laying as well as bomb and torpedo attacks. Following the creation of the Luftwaffe, Raeder and Göring had originally agreed that naval aviation should be under the control of the navy, while the Luftwaffe supplied men and machines. The first plans envisaged some 300 aircraft in twenty-five flights (Staffeln), later increased to 700 aircraft in sixty-two Staffeln, grouped in around twenty Seekampfgeschwader and Küstenfliegergruppen by 1942, assigned to the Kriegsmarine.[15]

In late 1938, Göring saw that the new aircraft carriers being planned would become prestigious projects and decided that the Luftwaffe should be fully responsible for all aspects of flying off from them. For good measure, he also added all naval air operations such as mine-laying, attacks on shipping and reconnaissance, claiming, 'anything that flies, belongs to me!' This meant that the ambitious plan for a naval air force was all but abandoned in favour of fighters and army support aircraft.[16] Even worse, as the total responsibility also included communication, it meant that any information from the aircraft was delayed for several hours while it went up the Luftwaffe system and then back down through the navy to the ships. Except for the often very experienced long-range reconnaissance pilots, the Luftwaffe entered the war with limited experience in operations over water, and few if any of its pilots had any experience at all in anti-shipping operations.



He115 of 3.KüFlGr 106. Note the wear on the exposed parts from flying through rough conditions during the autumn and winter of 1939/40. (Author’s collection)

By the autumn of 1939, fifteen naval reconnaissance units were operational, organised in five groups with some 154 aircraft in the North Sea region and the Baltic. Most of these were equipped with Heinkel He115, He59 and He60 floatplanes or Dornier Do18 flying boats. [17] Slow, poorly armed and cumbersome, these were still robust aircraft and the Do18 in particular had a considerable operational radius. The He115 could carry a fair load of bombs as well as mines and torpedoes but was feebly armed and rather helpless as a bomber. The torpedoes available at the time were poorly suited for the He115 and, in spite of some attempts during the winter, it would be March 1940 before modified torpedoes became available and He115s of KüFlGr 506 commenced sorties on the British coast against merchant ships.[18]

There was a disturbing loss of naval aircraft early in the war, including in most cases their experienced crews, who could not be replaced.[19] Weather conditions in the North Sea were treacherous during the autumn and winter of 1939/40, and many aircraft vanished without a trace. Aerial navigation in poor weather over the North Sea required skilled navigators with a fair amount of luck. D/F methods had been developed but the radio beacon transmitters on which they depended were poorly developed and rarely used. In an emergency, the navigator could request bearings from ground stations, but this required contact with suitable ground stations – not always possible over the sea. A handful of Luftwaffe navigators had experience from the merchant marine and/or the pre-war long-distance transatlantic routes and knew how to use a sextant, but this required a clear sky and special onboard equipment and was of limited practical use.[20]

After the Polish campaign, most of the naval aircraft were moved to the west and stationed at Norderney, Borkum, Hörnum and Sylt. To operate over the North Sea, faster and better-armed aircraft were needed but these were not easily made available as it meant reallocating from the regular Luftwaffe stock. Göring had no enthusiasm for such a transfer in spite of

earlier promises, and during the autumn only two units, KüFlGr 606 and 806, were set up, equipped with Do17Z and He111J aircraft, respectively, for long-range armed reconnaissance. The Luftwaffe was first and foremost a tactical air force and its aircraft designed primarily for support of land forces. The Kriegsmarine's request for a long-range aircraft capable of armed reconnaissance missions into the Atlantic in cooperation with U-boats was similarly ignored.[21]

Ironically, the Ju87 Stuka dive-bomber would certainly have been an effective anti-shipping bomber, had it not been for its limited range. In February 1939, work commenced to assemble several Stuka Staffeln for the carrier *Graf Zeppelin*, together with a navalised version of the Bf109 fighter. These units should have been ready to start operational training by November that same year, but the outbreak of war disrupted the plans and, when work on the carrier was suspended in early 1940, the men and their aircraft were dispersed to the regular units.

In the spring of 1939, after massive pressure from the navy, the Luftwaffe's new Chief of Staff, Oberst Hans Jeschonnek, ordered Hauptmann (later Major) Edgar Petersen to form a Fernaufklärungstaffel – long-range reconnaissance squadron – of experienced airmen 'capable of sinking ships' as well as flying long missions over the sea. Petersen's challenge was that there was no suitable aircraft available, the designated He177 being years from becoming operational. As a makeshift solution, Petersen suggested that a number of the civilian Focke Wulf FW200 Condor aircraft, built for export but not yet delivered, should be held back and re-equipped as long-range reconnaissance bombers.[22] Jeschonnek approved and when the first aircraft became ready in November, Petersen was appointed Gruppenkommandeur of I/KG40 at Bremen, directly subordinated to the Oberkommando der Luftwaffe (OBdL), Göring. The modification consisted of added fuel tanks for up to fifteen hours' flying time, strengthening the wings and undercarriage, and arming it with several

machine-gun positions. The strengthening was insufficient and the Condors suffered continuously from structural weaknesses, resulting in many accidents. Another significant inadequacy with the Condor was the lack of a bomb-bay. Its low wing configuration, ideal for an airliner, meant all ordnance had to be carried under-wing, limiting the number and size of bombs as well as increasing drag, even with small loads. While waiting for the first Condors to become available, an instruction course in maritime air operations was set up at Oldenburg. During the summer of 1939, a handful of Luftwaffe pilots started flying long distances over water – some as far as the Faeroes, others along the Norwegian coast as far as the Arctic Circle at 66º N.

On 3 September, Generalleutnant Hans Ferdinand Geisler was taken from the staff of 2nd Air Fleet where he had been posted in order to develop anti-shipping competence and given command of X Fliegerdivision with one specific task: the anti-shipping war at sea against the Allied naval and merchant fleets. The naval pilot Major Martin Harlinghausen was assigned as Chief of Staff while Major Petersen, still waiting for the first Condors to be delivered, was appointed navigation officer. They settled down at Blankenese near Hamburg while the airfield at Westerland on the island of Sylt was prepared as a forward base.[23]

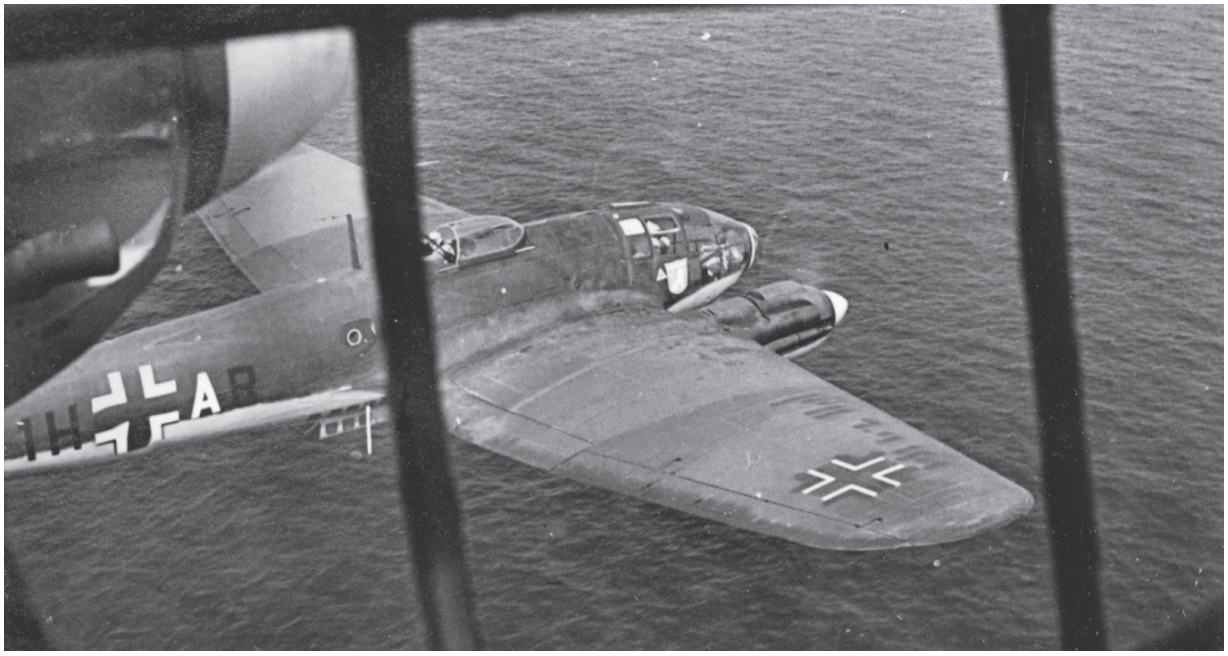
The first unit assigned to X Fliegerdivision on completion of the Polish campaign was the Heinkel He111-equipped KG26 *Löwen* Geschwader.[24] A number of the pilots of the Geschwader, including the C-in-C Oberst Hans Siburg, were naval personnel transferred to the Luftwaffe, but few had much experience in maritime aviation. The He111 was a sturdy but relatively slow medium bomber, far better suited for the intended tactical support role than chasing naval targets. In spite of a fairly respectable bomb load, the level bombing of agile warships was seldom to be successful, except where the ships were trapped in harbours or confined waters.

A greater asset would be the Junkers Ju88, pressed into service in the early days of the war. The sleek, twin-engine bomber was faster than the He111 and carried dive brakes, allowing it to attack through a steep dive and deliver the bombs from low level – a tactic far more dangerous to warships than traditional level bombing, as was to be shown in the following months. The added weight of the dive brakes, armament and other equipment necessary as the aircraft was deployed to active units reduced its initial speed and range significantly and, in spite of being nicknamed both the *Schnellbomber* (fast bomber) and *Wunderbomber* (wonder bomber), the Ju88 never fully lived up to its initial promises. In spite of warnings not to commit the new aircraft piecemeal into battle, Göring insisted on results, and the first operational Ju88A-1s were assigned to the newly established I/KG30 in early September. The pilots led by Hauptmann Helmut Pohle were among the best and most experienced the Luftwaffe could muster. The four best crews of these again were deployed in a 'readiness flight' at Westerland under Leutnant Walter Storp, in case an opportunity should develop while the rest of the group was working up and made operational in the Baltic.[25]

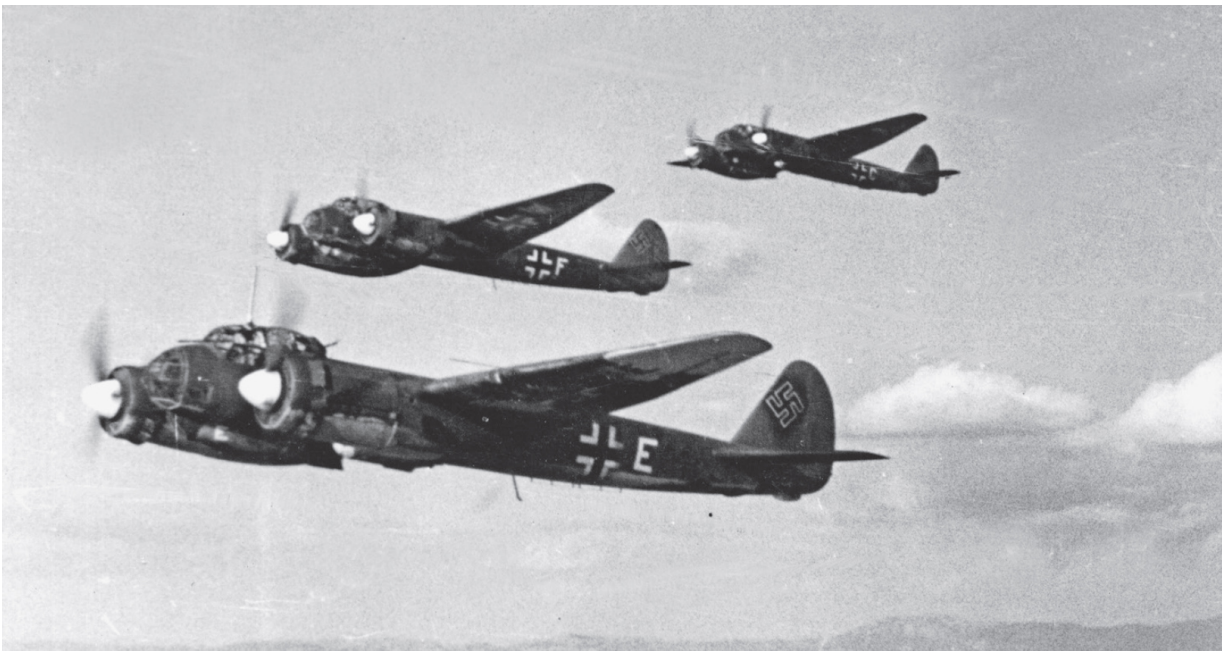
Soon, a steady flow of Ju88s was coming out of the Junkers factories and, in December 1939, another Gruppe, II/KG30, was declared operational and a month later III/KG30 and the Stab were also ready. Oberstleutnant Walter Löbel was appointed C-in-C of KG30, known as the *Adler* Geschwader.[26] Löbel and the two last Gruppen were initially based in the Baltic to acquaint themselves with the anti-shipping tactics in relative comfort but they all moved to Westerland during March 1940. The Eagles of KG30 and the Lions of KG26 were to develop a close partnership in the following months. The slower He111s of KG26 would primarily concentrate on Allied merchant shipping while the faster, dive-bombing Ju88s of KG30 took on the Royal Navy.

Emergency Readiness

The first opportunity for X Fliegerdivision to present itself came in the morning of 26 September, when a Do18 of 2./506 sighted heavy British surface forces in the North Sea. This was *Hood* and *Renown* with 18th Cruiser Squadron and destroyers, covering the return of the damaged submarine *Spearfish* (see Chapter 15). Admiral Forbes was further north in the Bergen–Shetland Narrows with *Ark Royal, Nelson* and *Rodney*, and these ships were also found, confirming that the entire Home Fleet was at sea. A Do17 of 4(F)./122 was sent to Scapa Flow to verify that the fleet was out and that there was no misidentification. The newly installed A/A guns at the anchorage opened fire, but the Dornier was too high to be in any danger and returned safely to its base at Varel near Wilhelmshaven. The photographs taken, authenticating that the Home Fleet was out, were a significant leap in the quality of the tactical information available to the SKL.



He111 of 7.KG26. (Author’s collection)



Ju88s of Lehrgeschwader 1. (Author’s collection)

Meanwhile, nine He111s of I/KG26 were scrambled from Westerland under Hauptmann Vetter, as were the four Ju88s of I/KG30'S 'readiness flight' under Leutnant Storp:

The crews were just sitting down for lunch as a long-distance telephone call came in. *Emergency Readiness!* I ran to the operations room. An enemy sighting had been reported: Two English battlecruisers, an aircraft carrier and a number of destroyers and torpedoboats steering west in the middle of the North Sea, roughly half-way between the coast of Scotland and the Norwegian coast. Main target is the carrier! We took off individually – one after the other – and within a few minutes we were airborne.[27]

Following the beacons transmitted by the Do18s, the bombers arrived over the British fleet around 14:20.[28] With no radar and the Skuas from *Ark Royal* chasing the Dorniers, the incoming bombers were not observed.[29] Storp continued his account:

Flying at low level, we made contact about an hour later. At first we saw two cruisers. Coming out of the sun, we flew past them and realised, to our wonder, that they had not seen us. Should we attack them? No, our target is the aircraft carrier. Hence, we continued northwards. There! The carrier! Suddenly a tall, grey-black column rose close alongside. That was the first bomb from the lead machine ahead of me.[30]

Gefreiter Carl Franke in the lead aircraft was a very experienced pilot in spite of his lowly rank.[31] His account is unassuming:

I was the first to arrive over the English fleet. Flying low, I was somewhat startled when they suddenly appeared below, but I believe they were even more surprised. I climbed [into the clouds] as fast as I could to 3,000 metres, the appropriate height for us to commence the attack from. The carrier was our main target, […] but the first approach was not quite as I wanted. I could not see the carrier properly through the clouds and when it did emerge, it was not right in my sights. I aborted the dive and climbed into the clouds again for another approach. The second time I had the carrier as I wanted after a minor correction. The flak did not harm us. At the preset time I pressed the release switch, the bombs fell and we made our escape. I was busy recovering my aircraft, but as my crew and […] my Staffel commander could later confirm, they exploded very close to the starboard side and must have resulted in severe underwater damage. […] We managed to get away, but I can imagine my comrades coming behind, also wishing to drop their bombs on the British ships, had a hard time [due to the A/A guns].[32]

No fire had come from the carrier during his first low-level approach. In fact, the fire control on *Ark Royal* had mistaken the unknown Ju88 aircraft for one of the new Hudsons of Coastal Command. One alert lookout had observed the black crosses under the wings, though, and the alarm was sounded. When Franke reappeared after a few minutes, the A/A guns opened up and, when the bombs were finally seen to fall, the carrier turned hard to get out of harm's way – just. Two half-ton bombs were dropped. One missed by 20 yards, the other exploded even closer, sending a tall water column onto the foredeck, shaking the hull and lifting armourer Roy Stevens of 800 Squadron and most of those working on deck at the time off their feet.

As Franke sped away, the three other Ju88s dived out of the cloud cover for the other ships. The lively A/A fire and some fortunate manoeuvring meant that only *Hood* was hit, but without sustaining any damage, as the bomb bounced off her side-armour. Admiral Forbes later admitted in his report that 'the control personnel were obviously unprepared for such high performance dive-bombing'. Meanwhile, the He111s from KG26 also attacked the 18th Cruiser Squadron through the clouds from 4,300 yards in level flight. No hits were scored.

Leutnant Walter Storp (photo taken later in the war when he had been promoted several times and been awarded the Knight's Cross and Oak Leaves).

Gefreiter Carl Franke (J Weal collection)

Franke's crew reported one near miss and one possible hit or very near miss on the carrier. What appeared to the crew as a flash and a smoke column had been seen on the foredeck, but whether this was from a bomb hit was unclear. No certain damage had been observed. When subsequent reconnaissance found the other ships but not the carrier, which had split off in the meantime, German propaganda made the most of the incident, claiming with great élan that *Ark Royal* had been sunk.[33] The carrier returned safely to Scapa Flow, shaken but largely unhurt, and boasting the first aircraft shot down by a carrier-borne aircraft.[34]

The Admiralty completely failed to recognise the new lethal threat demonstrated by the dive-bombing Ju88s and interpreted incredible luck as proof of its own theories. That a few determined and competent pilots with a new aircraft and an actually not so new tactical concept had been within inches of seriously damaging an aircraft carrier and a battlecruiser whose A/A protection had been clearly inadequate was totally overlooked. Had *Ark Royal* been hit, a half-ton bomb exploding below decks would undoubtedly have caused serious damage and the carrier would at best have been out of service for a long time.[35]

* * *

Smarting from the false claims of having sunk *Ark Royal* and Prien's success at Scapa Flow, Göring pressed his pilots to be even more aggressive and ordered an increased reconnaissance in the Nasse Dreieck – the 'wet triangle' – between Britain, Norway and Germany. At this stage of the war, the German pilots were under strict orders not to hit any civilian targets, and ships in harbour, docks or yards were not to be attacked for fear of collateral damage to civilians. An attack would have to happen in open sea or at one of the main anchorages. Sinking, or at least damaging, *Hood* would be the perfect antidote for Dönitz's and Raeder's newfound prestige with Hitler, and extensive reconnaissance was instigated to find her.[36]

In October, Geisler's group was upgraded to a full air corps and renamed X Fliegerkorps. I/KG30 and all of KG26 were up to strength and, while waiting for the rest of KG30 to become operational, two Gruppen of LG1 were temporarily assigned as additional reinforcement. Göring still lacked his front-page success and called Gruppenkommandeur Pohle to Berlin, urging him to deploy all his Ju88s to Westerland and be ready for the right chance. The Kriegsmarine would stage a trap, he said, as this might lessen the pressure on the *Panzerschiffe* still operating in the Atlantic.[37]

On 7 October, *Gneisenau* and *Köln*, supported by nine destroyers, left Wilhelmshaven under the command of Admiral Boehm. As predicted, the sortie created alarm when a Hudson from 224 Squadron sighted the ships on a northward course 40 miles off Lista. Admiral Forbes took to sea with the Home Fleet, as did the Humber Force from Firth of Forth. By the time Forbes was in the North Sea, however, Boehm had reversed course, turned into the Skagerrak, and was headed for Kiel.[38]

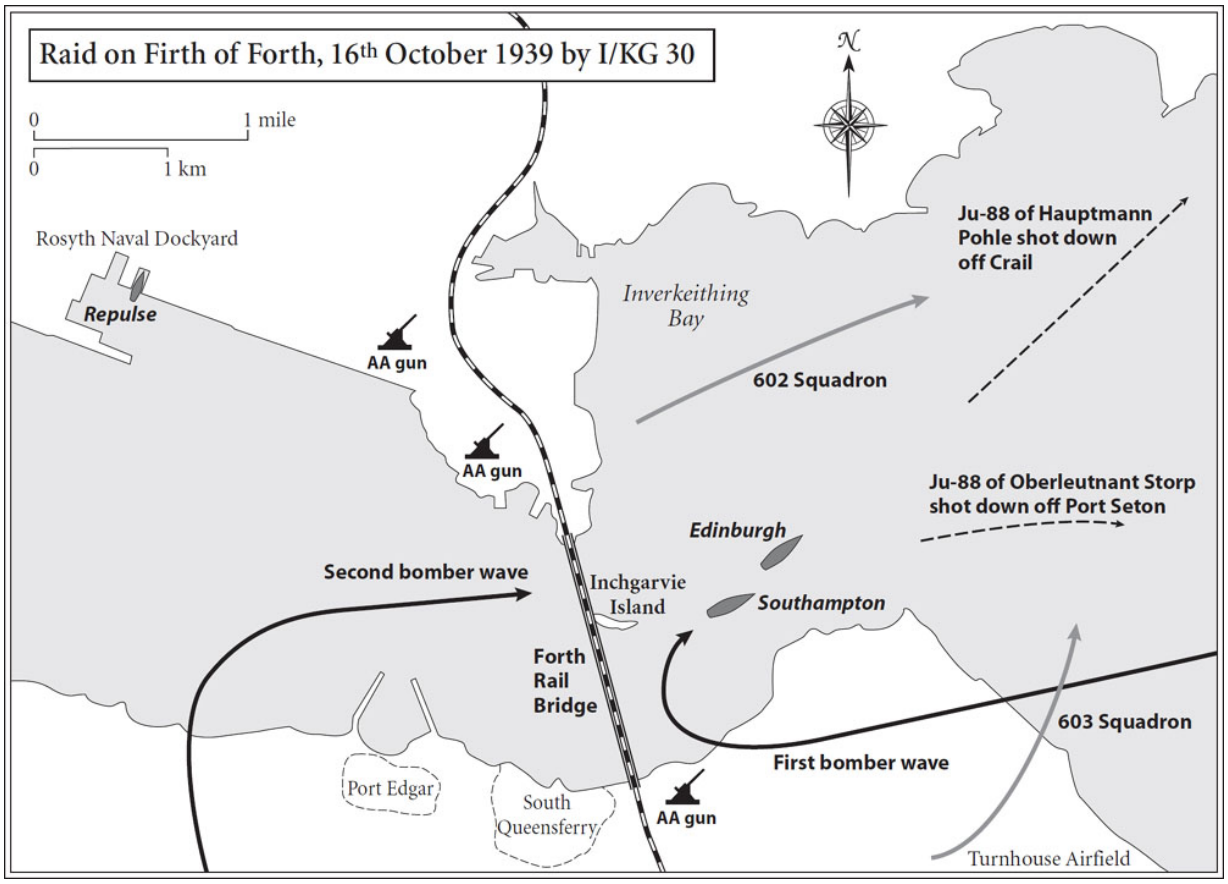
The trap had been sprung, though, and Geisler's aircraft took off in the morning of the 9th; more than a hundred He111s from KG26 and LG1 and twenty-one Ju88s from I/KG30. They were met by poor weather and only four Ju88s from KG30, and a Staffel of Heinkels from KG26 found the ships of the Humber Force, *Southampton, Glasgow* and *Edinburgh*, screened by *Jackal* and *Janus*.[39] The other aircraft returned to base with empty tanks and angry comments. The pilots of KG30 claimed no hits, while those of KG26 claimed one on a cruiser. No British ships sustained damage on this day.[40] Chief Petty Officer Smith of *Glasgow* wrote:

> Attacked by enemy bombers from 11:00 onwards. First plane diving very low dropping bombs between us and *Southampton*. Incessant firing of our A/A deterred them from further loco efforts. Keeping well up, they drop bombs until 17:30. After wasting 110 bombs, no damage sustained to ships or morale.[41]

His commanding officer Captain Frank Pegram's account was slightly more formal:

With the exception of one dive bombing attack carried out by a reconnaissance machine at *Southampton*, all attacks were of the high level bombing type. The attacks were made in waves by single machines, usually from the direction of the sun, at heights varying from 12,000 to 20,000 ft., the formation breaking up outside gun range. […] Estimated number of bombs dropped – 120 in salvoes of 3, 4 or 5. Distance of nearest bomb from *Glasgow* – 75 yards.[42]

October 1939: the naval yards of Rosyth as seen from a German reconnaissance aircraft. A capital ship, possibly *Repulse*, is seen in the dock by the arrow. (J Weal collection)



Modified from Taylor, *Luftwaffe over Scotland*

When, a week later, what was believed to be the elusive *Hood* was reported entering Rosyth, KG30 was ordered to prepare an attack. At 11:00 on 16 October, a dozen Ju88s of I/KG30 led by Group Commander Hauptmann Pohle took off from Westerland. The round trip would be some 1,100 miles, close to the maximum range of the early Ju88s and the bomb load was limited. Unknown to Göring and the pilots of KG30, it was not *Hood* that had been sighted, but *Repulse*. By the time Pohle set course for Scotland, she was already in dock and could not be attacked due to the strict order to minimise collateral damage. Worse, Pohle and his men had been informed that there were no fighters in Scotland. In fact, two Spitfire squadrons had been deployed in the vicinity of Edinburgh in May 1939 –

603 Squadron at Turnhouse aerodrome west of the city and 602 Squadron at Drem in East Lothian.[43]

Nine of the KG30 aircraft reached Rosyth in groups of three at around 14:30 and attacked in two waves, the first German aerial attack on the British mainland. Hauptmann Pohle sighted several warships in Rosyth harbour but *Hood* was nowhere to be seen. *Repulse*, seen at the naval dockyard was a stationary target, perfect for dive-bombing, but out of bounds, so the best he could do was to attack two cruisers at anchor off Inchgarvie Island outside the Forth rail bridge, away from civilian population.[44]

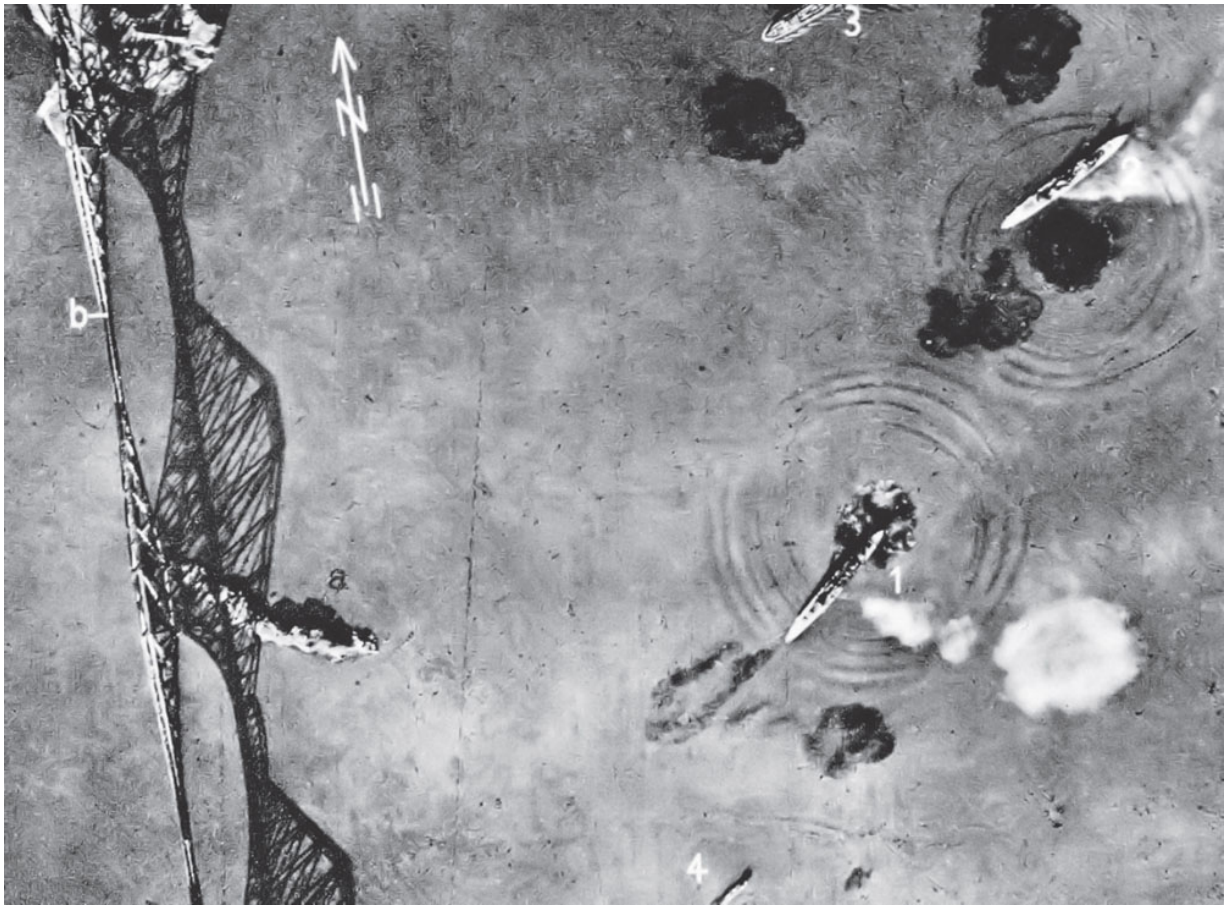
The attack on what turned out to be *Southampton* and *Edinburgh* took the British air defence completely by surprise. The local radar system was down that day due to a trivial technical failure and no alarm had been given. Some of the A/A gunners were engaged in gun drill when the German aircraft appeared overhead and hastily had to exchange their dummy ammunition for live, while frantic telephone calls were made to 602 and 603 Squadrons to scramble their Spitfires.

Diving his Ju88 on *Southampton* in an 80-degree plunge, Pohle experienced something he had heard happen to other pilots during testing of the Ju88: ‘Suddenly,’ he wrote, ‘there was an almighty crack as the roof of the canopy flew off, taking the rear gun with it,’ leaving the horrified crewmembers literally in the open. In spite of the intense wind, Pohle held his aircraft steady and dropped the bomb squarely on *Southampton* before easing his damaged bomber out of the dive, climbing away to the north. The half-ton bomb hit the cruiser, but failed to detonate. Instead, it penetrated three decks before exiting the side, sinking the ship’s launch moored alongside. *Edinburgh* was not hit directly by any bomb, but suffered some splinter damage.

No sooner had the first Spitfires of 603 Squadron left the ground before they made contact with the first three Ju88s at 4,000 feet. The bombers

were scattered, and Flight Lieutenant Patrick Gifford tagged on to the Ju88 of Oberleutnant Hans Storp. The Junker eventually crashed into the sea, 4 miles off Port Seton – the first German aircraft shot down over the British mainland in WWII. Three survivors, including Storp, were picked up by the trawler *Dayspring*.[45]

Meanwhile, the Spitfires of 602 Squadron had at first been sent further south, but were called back once it was clear that the attack was on Rosyth. They immediately joined the fight and soon a second Ju88 fell towards the sea. This was the aircraft of Hauptmann Pohle himself. While recovering the aircraft from the horrific, canopyless dive, the Junker was hit by gunfire from the Spitfires of Flight Lieutenants George Pinkerton and Archie McKellar. 'I didn't have a chance to take any evasive action,' Pohle wrote. 'Our left engine was hit almost immediately and began to smoke. I turned out to sea, hoping to reach *Hörnum* – a rescue trawler the Kriegsmarine had stationed off the Scottish coast.'[46] There was no chance of making it; the stricken bomber plunged into the water 3 miles east of Crail, nearly colliding with a coaster. Pohle was rescued with only minor wounds to his face; the three crewmembers were dead.[47] George Pinkerton was credited with the kill, and both he and Gifford received the Distinguished Flying Cross for their efforts.



Rosyth, 16 October 1939. Cruisers *Southampton* and *Edinburgh* under attack by Pohle's Ju88s. The Firth of Forth railway bridge and Inchgarvie Island are to the left. (J Weal collection)

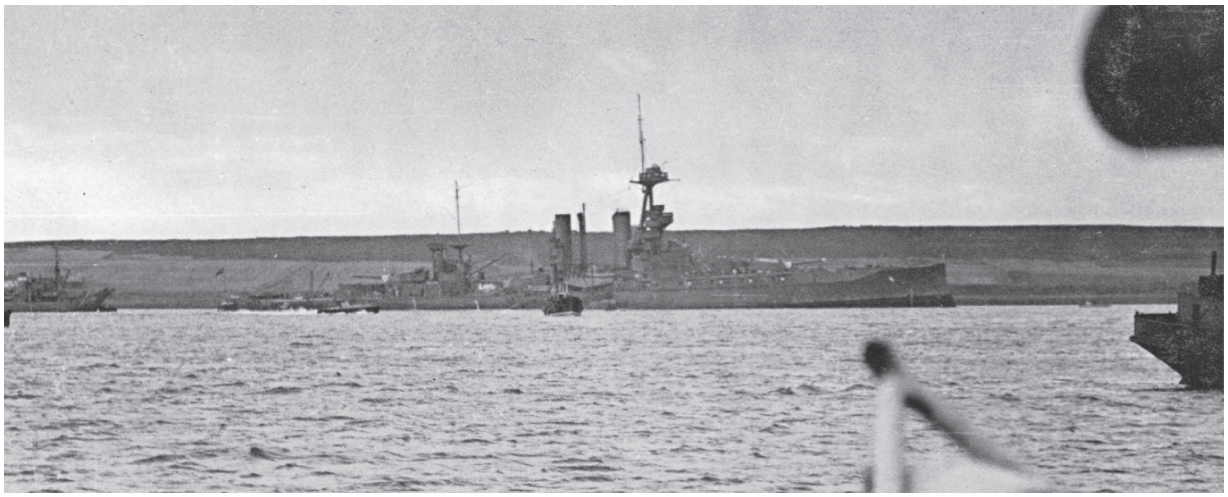
The destroyer *Mohawk* was further out in the Firth of Forth, waiting for an incoming convoy off the Isle of May.[48] Commander Richard Jolly ordered action stations and opened fire when the Junkers approached. At first *Mohawk* was ignored for the larger cruisers, but Leutnant Horst von Riesen in one of the later waves probably found her an easier target. Two bombs fell close to the destroyer, exploding as they hit the water, one to starboard abreast the bridge, the other to port abreast the torpedo tubes. Machine-gun bullets and shrapnel slashed through the bridge, the wheelhouse and the director, severing the communications system and mowing down the men manning the A/A guns. Fifteen sailors were killed outright and over thirty injured. On the bridge, Commander Richard Jolly was hit in the stomach and legs, while First Lieutenant O'Shea was killed. Jolly was badly hurt and in great pain but refused medical attention, remaining in command of his ship until it was safely in port, an hour and a half later. He died five hours later in hospital.[49] *Mohawk* made her way to the yards on the Tyne River for repairs.

Leutnant von Riesen's aircraft, damaged by flak during the dive, was pounced upon by Spitfires from both 602 and 603 Squadron as he tried to escape low over the water after dropping his bombs. One of the engines had been damaged by the A/A fire and seized, but to the crew's immense relief, the fighters gave up and after a four-hour gruelling flight across the North Sea on one engine, an exhausted von Riesen could land his Junker at Westerland.

Numerous lessons were to be learned from this air attack. On the British side, there had been no air-raid warning given either to the A/A guns, the fighter aircraft, the ships or the civilian population. Routines obviously had to be improved, as had the standards of training for the A/A gunners, although it appears that they reacted fast enough once they realised there was an attack in progress. In spite of the two aircraft shot down, it was concluded that the Spitfires had opened fire from too far away and to

become more efficient would have to get significantly closer next time. Navy Skuas on training operations out of Donibristle had strayed into the battle, causing some confusion, which prompted a more efficient air-control system.

For the Luftwaffe it was above all a sobering demonstration of their crippling lack of long-range bombers with adequate bomb load, able to render damage where it mattered most. As had been demonstrated some weeks earlier when *Hood* had been hit by two of them, the bomb carried by the Luftwaffe at the time, the SC 550, was ineffective against the deck armour of naval vessels. I/KG30 returned to Sylt, battered and bruised, having achieved little for their efforts, but losing two aircraft, including their group commander.[50]



Iron Duke aground at Scapa Flow after the attack on 17 October. (D Briggs collection)

The next day, the 17th, another four JU88s of I/KG30 attacked Scapa Flow – the first air attack on the anchorage. The weather was perfect, not a cloud in the sky, but the German airmen, led by Hauptmann Fritz Doench, the new group commander after Pohle, could only find the ancient *Iron Duke*, now a decommissioned administration centre, partly stripped of her guns. Two bombs hit the stationary target and she immediately began to sink. A nearby tug managed to get a line on board and Jellicoe's former flagship was unceremoniously beached at Ore Bay with one man killed and twenty-five injured. The A/A forces at Scapa Flow were highly alert after the sinking of *Royal Oak* a few days earlier, and No. 1 gun of 226 Heavy Anti-Aircraft Battery scored a direct hit on one of the Junkers. It crashed in flames on the island of Hoy, killing three of the crew, including the pilot, while the radio operator Fritz Ambrosius parachuted to safety, badly burned.

The presence of large German bomber forces so far into the North Sea was highly alarming just days after *U47* had penetrated the defences of Scapa Flow. The A/A defences at Scapa Flow were woefully inadequate due to the slow change in priorities, and Forbes was worried enough to take his fleet back to Loch Ewe, beyond the range of the German bombers, with the consent of the Admiralty.[51] Loch Ewe was not a satisfactory place for a permanent base but it would have to do until Scapa Flow had been adequately secured in the first half of 1940. In spite of losses and without direct successes, the Luftwaffe's aircraft and Kriegsmarine's submarines had, with a few bold strokes, achieved a strategic victory of quite some dimension. By moving out of Scapa Flow, the Home Fleet temporarily left the North Sea to German dominance, significantly increasing the time it would take the British to intercept raiders and surface ships. It is doubtful if this was fully recognised at the time by the Kriegsmarine – certainly not by Göring, for whom the only thing that mattered was the sinking of British ships.

Other air attacks on ports and bases in Scotland followed, but with the Home Fleet out of reach for the time being, the worsening weather laid a dampener on offensive air operations towards the end of the year. Unlike other parts of Britain, which were still largely out of reach, reconnaissance flights were regular over Scotland, occasionally resulting in losses on both sides.

By October, the X Fliegerkorps had grown in strength and experience, and an offensive against British merchant ships, trawlers and naval auxiliaries was initiated. Several convoys were attacked, as were mine-sweeping flotillas working off the north-east coast. At the same time, it was decided that the other naval air units should focus on longdistance reconnaissance and only attack submarines and smaller vessels under favourable conditions. The cooperation between the SKL and Geisler was generally good, even if he was never able to provide long-distance fighter support for naval reconnaissance missions. In January and most of February, when thick ice immobilised the seaplanes and flying boats of the naval units, Geisler's land-based aircraft were also deployed on long-distance reconnaissance patrols. In early 1940, KG100 joined the corps. The pilots of this group had been trained to fly as pathfinders, using radio navigation. The system was not ready for operational deployment and, as no strategic bombing campaign on France and Britain had yet been decided on, it was found convenient to use the KG100 pilots on reconnaissance and anti-shipping missions over the North Sea.[52]

In February 1940, after pressure from Admiral Raeder, IX Fliegerdivision was established at the airbase at Jever under the command of General Joachim Coeler. Raeder's idea was that this would be a specialist reconnaissance, anti-shipping and above all a mine-laying unit, supplementing X Fliegerkorps. When the division became operational, though, Coeler reported directly to the OBdL, and Göring had no intention of letting any of his aircraft take on missions not approved by him or his

staff, hence the unit never really focused on naval operations. A planned sortie to lay mines in the entrance to Scapa Flow and the river Clyde on 28 March was cancelled with less than twenty-four hours' notice by Göring in person, without informing the navy. On 23 May 1940 the division was subordinated to Luftflotte 2 and shortly after transferred to the newly captured Soesterberg air base in Holland. In November, the unit was redesignated again, this time to IX Fliegerkorps and lost to the Kriegsmarine altogether.[53]

In early April 1940, I/KG40 was rushed into service and assigned to X Fliegerkorps. Petersen and his Condors flew their first missions over Norway in conjunction with Operation Weserübung.

Return to Scapa Flow

In December 1939, 111 Squadron became the first Hawker Hurricane-equipped unit based in Scotland. Initially, the squadron was based at Drem but, in late February 1940, it moved to Wick, where also 43 and 605 Squadrons arrived, as part of a three-squadron Hurricane fighter wing. At Drem, 72 Squadron moved in with its Spitfires while 603 Squadron, also with Spitfires, moved to Prestwick with detachments at Dyce and Montrose.[54] Meanwhile, 804 Naval Air Squadron was formed at Hatston and Fighter Flight Shetland at Sumburgh, both equipped with Gloster Sea Gladiators, to defend Shetland proper. Units of the Fleet Air Arm with Skuas, Rocs and Sea Gladiators were also stationed at the Naval Air Station at Hatston but these aircraft could be flown onto the carriers on short notice.

With the Home Fleet out of reach, the Luftwaffe concentrated its attacks on shipping off the north coast of Scotland. Among the victims of these attacks was the 2,178-ton *Giralda*, which was bombed and sunk on 30 January 1940 off South Ronaldsay. On 20 March, the 1,211-ton freighter *Northern Coast* was intercepted by Heinkels from 6/KG26. She was hit by several bombs and heavily machine-gunned, but retaliated with her Lewis

guns and succeeded in damaging one of the attackers. This was eventually shot down by a Hurricane of 43 Squadron, scrambled from Wick. The speed of the badly crippled coaster was reduced to a crawl, but Captain Quirk refused to give up and set course for Kirkwall, some 30 miles away. The Hurricane circled the stricken *Northern Coast* as her crew pumped water into the blazing holds. Reaching Kirkwall Bay at last, Quirk received a signal from RAF Wick: 'Hearty congratulations on your courageous fight. Shout if you want us again.'[55]

In early March, the decoy ships *Pakeha* and *Waimana*, posing as *Revenge* and *Resolution*, respectively, spent some time at Scapa Flow, testing the efficiency of the upgraded A/A defences.[56] X Fliegerkorps had during January and February roamed the British east coast, including Scotland and the Orkneys, appearing over Scapa Flow with increasing frequency. The radar operators and plotting rooms were kept busy and fighter patrols were scrambled just about every day. Admiral Forbes was impatient, and, satisfied that matters were adequate, *Valiant* and *Hood*, escorted by *Faulknor, Fame, Forester, Kelly, Kandahar* and *Sikh*, once again entered Scapa Flow on 7 March. Within days, most of the capital ships of the Home Fleet had arrived at the anchorage. As soon as the return of the Home Fleet to the Orkneys had been ascertained, the SKL pressed for the Luftwaffe to mount a series of attacks to try to scare it away again or at least inflict some damage prior to operations against Denmark and Norway. The opening raid was mounted at dusk on 16 March by a mixed force of sixteen He111s from KG26 and eighteen Ju88s from I/KG30 operating in small groups.[57]

The first wave of three Ju88s approached from the east at 19:52. Splitting up, they dived from 8,000 feet, one each on *Rodney, Renown* and *Norfolk*. The latter was hit by one bomb and had one near miss abreast starboard quarterdeck. The 250-kg (550-lb) bomb that hit penetrated *Norfolk*'s port side quarterdeck, abaft the Y turret, passing through main

and lower decks, before exploding near the Y shell room. Extensive flooding occurred. The X and Y magazines were intentionally flooded for safety. The steering gear was damaged, but effective damage control prevented a major disaster. Four men were killed and another seven wounded. The German pilots returned in very high spirits, believing they had scored major hits on several British capital ships, but no other ships were hit, although *Iron Duke* was damaged again by a near miss abreast the forecastle, causing some flooding.[58]

The rest of the aircraft, attacking after darkness had fallen, dropped high-explosive and incendiary bombs on Hatston, Bridge of Wraith and some of the blockships in Skerry Sound. To the surprise of ACOS Admiral French, the oil tanks at Stromness were not targeted. About 120 high explosives and over 500 incendiary bombs were dropped over Hatston, but apart from some cratering, easily repaired, damage was limited. At Bridge of Wraith, on the road between Kirkwall and Stromness, two cottages were damaged, one civilian was killed and seven injured. The Gladiators of 804 Squadron took off from Hatston in the gathering darkness. They failed to intercept any of the German aircraft and had ‘a hell of a job landing back at the airfield as there were no flares or runway lighting’.[59]

No further attacks were mounted on Scapa Flow in the following weeks, except for KG26 dropping mines in the main entrance on some occasions.

During the first week of April, virtually every operational vessel of the Kriegsmarine was preparing to take to sea for Operation Weserübung, the invasion of Denmark and Norway, and every attempt at preventing the Home Fleet from interfering was considered worth the risk. When the German bombers came in the afternoon of 8 April, most British ships were already at sea and the raid did little damage. The next day, 9 April, was rather quiet, while on the 10th, the combined fighter and A/A defences shot down at least seven aircraft from KG26 and KG30. After this, calm once again settled over Scapa Flow. The war had moved elsewhere.

— 17 —
Commerce Raiders

'We Shall Fight on the Seas'

DURING WWI, ARMED MERCHANT cruisers used as commerce raiders had been a serious threat to remote British sea lanes, and the Kriegsmarine developed plans early on for a number of such vessels to be deployed in a future war, supplementing the naval raiders. In order not to arouse any suspicion, the conversion of twenty-six selected vessels to AMCs (as well as the requisition of trawlers for A/S groups) did not commence prior to the actual outbreak of war. Hence, as the war approached in August 1939, only regular naval vessels were available for deployment.[1]

Anticipating that the planned aggression against Poland might escalate into a larger conflict, the SKL on 15 August ordered Kapitän zur See Hans Langsdorff of *Admiral Graf Spee* and Kapitän zur See Paul Wenneker of *Deutschland* to make ready to take to sea. At specified positions the *Panzerschiffe* would be met by the supply ships *Altmark* and *Westerwald*, respectively, both already at sea.[2]

In the Atlantic, the German surface ships would not have access to bases where they could fuel or resupply. Instead, based on tests in the late 1920s and later experience from Spain, four purpose-built multi-cargo fleet auxiliaries were ordered in 1937 to provide support for the *Panzerschiffe*. Known as *Trosschiffe* – literally 'luggage-vessels' – *Dithmarschen, Altmark* and *Westerwald* were operational at the start of the war.[3]

Kapitän zur See Paul Wenneker. (Author’s collection)

Altmark had a gross tonnage of 10,698 tons and a dead-weight capacity of 14,137 tons. With four powerful MAN diesel engines, her 178-metre-long (584 feet) slender hull could easily exceed 20 knots, and at a steady 15 knots her range would be some 13,000 nautical miles. The others ships were similar, but slightly larger. They were designed, built and operated by the Kriegsmarine as an integral part of the tactical disposition of the *Panzerschiffe* in merchant warfare, hence there is no question that they were warships, even if regularly disguised as merchant ships. Each vessel could carry nearly 10,000 tons of fuel oil and 400 tons of lubricating oil as well as aviation fuel, spares, provisions, water and ammunition, including heavy-calibre shells and torpedoes. Through an innovative technology, unknown in any other contemporary navy, up to 120 tons of fuel per hour could be transferred through buoyant rubber hoses, with the capital ship in slow tow astern the tanker. In addition, they were equipped with repair shops, hospital facilities, doctors and medical personnel. Large ship's boats were carried for ease of transfer of stores. The decks were reinforced in places to carry guns, which were usually concealed when not in use. Up to three 15-cm guns, two 37-mm and four 20-mm A/A guns, plus several machine guns were possible.[4]

The operational orders given to Langsdorff and Wenneker were clear but feeble. Enemy sea lanes should be disrupted and merchant ships captured or sunk. Naval forces, even inferior ones, should be avoided unless it would be to the advantage of the primary task, and the Prize Regulations should be adhered to. The fear of losing one of the ships constrained their use to the extent that effective commerce warfare for all practical purpose became impossible.

Deutschland was at the naval yard in Wilhelmshaven when the orders came to conclude the repair works as soon as possible and prepare for a lengthy cruise. Underlining the seriousness, live ammunition was taken on board and a new floatplane delivered.[5] Crews on leave were called back,

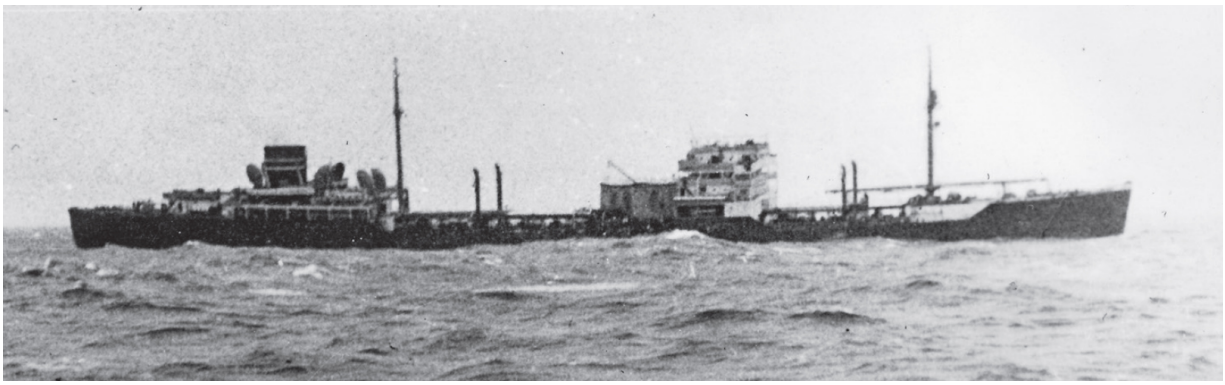
while prize crews, radio monitoring personnel, radar experts and a meteorologist joined the ship's company. At 15:00 on 24 August, *Deutschland* cast off and sailed for her North Atlantic holding position off Cape Farewell on Greenland. War watch conditions were set and the navigation lanterns turned off. Extensive air reconnaissance made it possible to avoid British or other ships in the North Sea and the *Panzerschiff* slipped unnoticed through the Bergen–Shetland Narrows during the night at 22 knots, whereafter she headed for the vastness of the Denmark Strait.

In the morning of the 30th, *Westerwald* (Korvettenkapitän Peter Grau) came into sight at the agreed position south-east of Greenland. After provisioning and refuelling, Kapitän Wenneker commenced exercises, the supply ship acting as target.[6] At 18:00 on 31 August, a signal was received from the SKL:

1 Commence hostilities against Poland in home waters 1.9.39 at 0445 hrs.
2 Position of Western Allies is unclear.
3 If Western Allies declare war, own naval forces shall only act in self-defence or on specific orders.
4 *Panzerschiffe* in Atlantic and U-boats shall remain in waiting positions for the time being. No hostilities, even against Polish merchantships, for the time being.[7]

Unique to any navy at the time, the Kriegsmarine had developed a technology whereby up to 120 tons of fuel per hour could be transferred through buoyant rubber hoses from a tanker to a capital ship in slow tow astern. Here, *Graf Spee* is refuelling from *Altmark* in the South Atlantic. Note that *Altmark* carries the name *Sogne* of Oslo on her stern, while the real names are painted over. (M W Pocock collection via Erik Ettrup)

Panzerschiff Deutschland, Wilhelmshaven 1937. (Author's collection)



Trosschiff *Westerwald*. At the start of the war, three such multi-cargo fleet auxiliaries – *Dithmarschen, Altmark* and *Westerwald* – were operational to provide support for the *Panzershiffe*. (E Skjold collection)

For a couple of days, the weather was poor and little happened. The news of Britain and France declaring war on Germany and introducing convoys to and from Europe created hopes of exciting quarry and, following the *Beginn*-signal on 3 September, preparations were made to start searching for Allied merchant ships once the weather improved. *Westerwald* was kept near, to top up the fuel reserves regularly and to avoid having to use radio. On 5 September, *Deutschland*'s aircraft failed to return after the morning sweep and a search for it was instigated. Fortunately, the Arado, which had run out of fuel and landed at sea, was found and recovered a few hours later. While this unfolded, another signal arrived from the SKL:

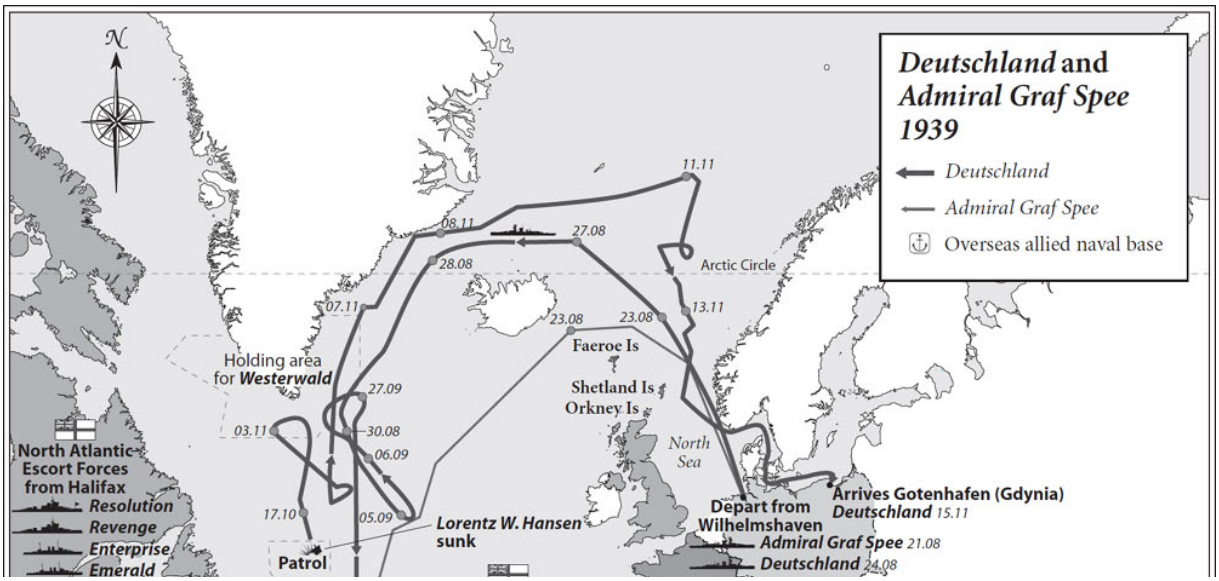
1 Reserved attitude of France and cautious warfare of Britain make deployment of *Panzerschiffe* unwanted at present.
2 In view of likely active enemy search for *Panzerschiffe* following disruption to merchant traffic, deployment is at present considered unfavourable against expected success.
3 Commencement of commerce warfare is hence suspended. Remain in waiting positions, distant from operational areas, North Atlantic, South Atlantic and Indian Ocean, respectively. Radio silence![8]

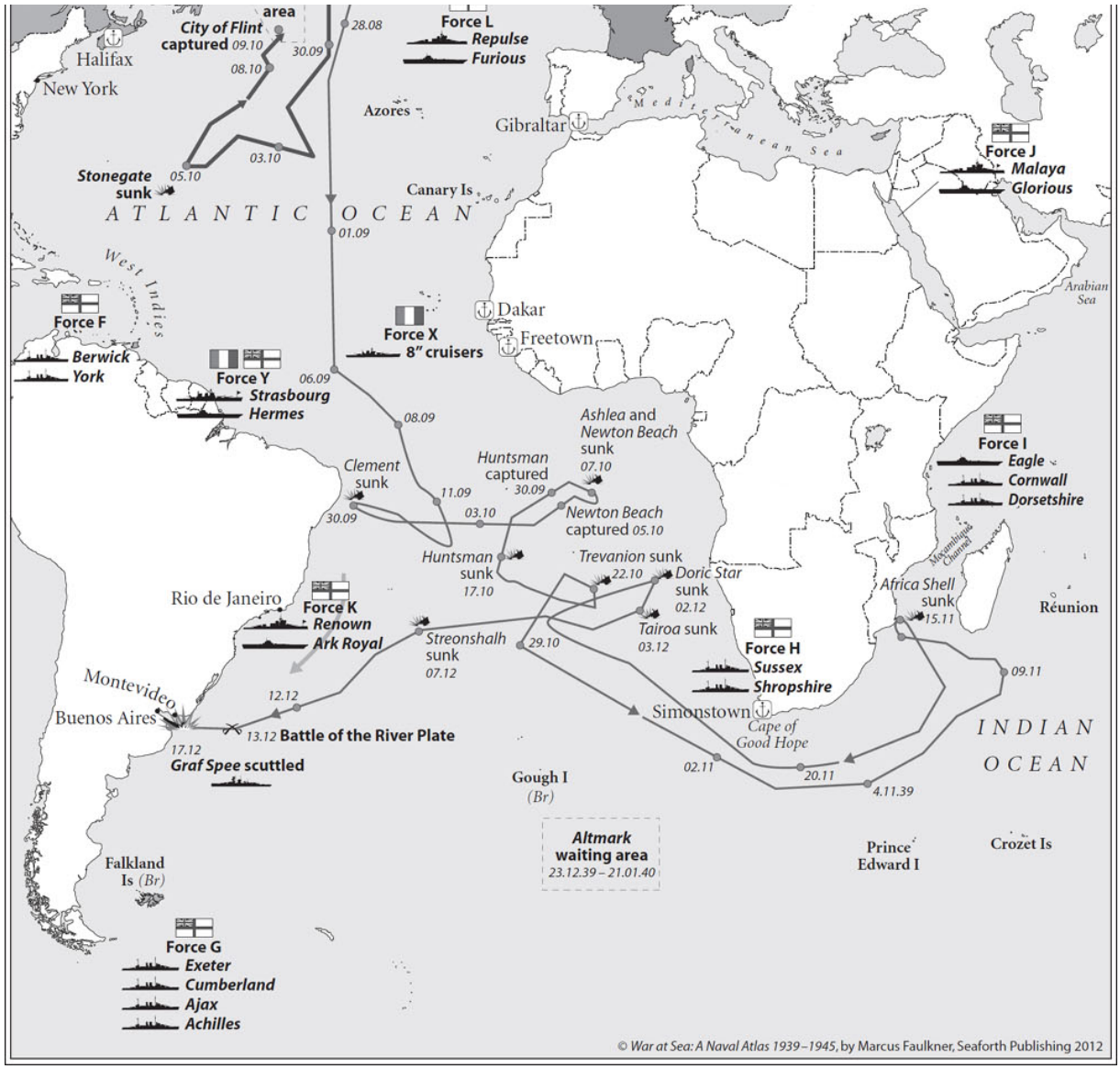
The disappointment was universal. Wenneker, who knew that once he started attacking Allied merchant ships, the Royal Navy would search for him in force, was perhaps one of the few feeling some relief at having been given a respite before going to war in earnest. He decided to return to a point south of the Denmark Strait to meet up with *Westerwald* on 9 September as he considered this the best option for remaining undiscovered. The weather remained atrocious, with high seas and poor visibility. This prevented the two ships from being sighted, but it also hindered provisioning and refuelling until, on the 11th, the seas calmed sufficiently for a successful attempt. After that, Wenneker let *Westerwald* run into the Labrador Sea while *Deutschland* passed the time drifting slowly some 50 miles south-east of Greenland. During this period, any vessel sighted on the

horizon was avoided and an emergency signal from a Canadian aircraft was left unanswered in order not to reveal their presence.[9]

In the meeting with Hitler in Zoppot near Danzig on 23 September, Raeder argued convincingly that while the ships were wasting valuable supplies, the morale of the officers and men was being undermined. Three days later, on 26 September, orders were issued from the SKL for the two *Panzerschiffe* to initiate offensive operations: 'Commence commerce warfare against France and England in defined areas according to Operational Orders. *Deutschland* in the North Atlantic, *Graf Spee* in the South. […] Radio silence, but report position and intentions if in contact with enemy warships or if reported by merchant shipping.'[10]

The subsequent events in the South Atlantic are well described elsewhere and beyond the scope of this book. In late October, *Graf Spee*'s Kapitän Langsdorff reported to the SKL that he intended to break through to home waters in early January 1940. On 12 December, though, he was intercepted by British cruisers off the River Plate and put into Montevideo. Langsdorff eventually decided it was futile to fight with the ammunition he had left and in the evening of 17 December, *Graf Spee* settled as a smoking wreck in the shallow waters of the River Plate Estuary. Two days later, Langsdorff pulled the trigger of his own Luger pistol.





In the North Atlantic, the weather remained atrocious and for *Deutschland* there were few Allied ships to be found. Reports from the SKL and signals intercepted by the onboard B-Dienst radio team made it clear to Kapitän Wenneker that the Allies knew the *Panzerschiffe* had been let loose, limiting the Atlantic traffic to essential, well-protected convoys. Apart from neutral ships, which were left alone, the sea was virtually empty. Information of convoys leaving the Caribbean or Canada did arrive by radio from Germany but was generally too vague to be acted upon.

When the Arado reconnaissance aircraft was damaged during landing on 4 October, things looked miserable.[11]

Finally, on the 5th, east of Bermuda, after six weeks at sea, the first legal prey came into sight; the 5,044-ton British freighter *Stonegate*. In spite of warning shots, her radio operator transmitted RRR – 'under attack by a surface raider'. Wenneker, alerted to the signalling by his onboard B-Dienst, hurried away once *Stonegate*'s thirty-nine-man crew had been taken on board and the freighter had been sunk by gunfire. Assuming the signals from *Stonegate* to have been received by British stations and *Deutschland*'s position compromised, Wenneker took the opportunity to send a signal to the SKL updating it for the first time since departure. It appears, however, that the RRR signals were not picked up anywhere.[12]

The next ship to be intercepted was the 4,963-ton American freighter *City of Flint* on 9 October, 1,200 miles east of New York. This was the same ship that had taken part in the rescue operations after the sinking of *Athenia* in early September. Now, she was carrying some 5,000 tons of lubricants, machinery, grains, canned food and other goods for Britain, and when Wenneker's boarding party discovered this, the ship was confiscated. Two officers and eighteen men under Leutnant zur See Hans Pusbach were left on board with orders to head north for Murmansk and then through neutral Norwegian waters to Germany. The men from *Stonegate* were also sent across and locked up before the freighter headed off.

In the following days, poor weather and heavy seas prevailed. It would not be possible to launch aircraft or boats and, to avoid unnecessary contacts, Wenneker steered away if anything was sighted from the foretop. On 12 October, though, the 3,594-ton Norwegian freighter *Jacob Christensen* emerged from a rainsquall too close to be avoided. Master August Konow signalled that his ship carried coal from Baltimore to Oslo and, as the sea was too rough for a boarding crew to be sent across, she was allowed to sail on. At this time, it must have appeared to Wenneker that the

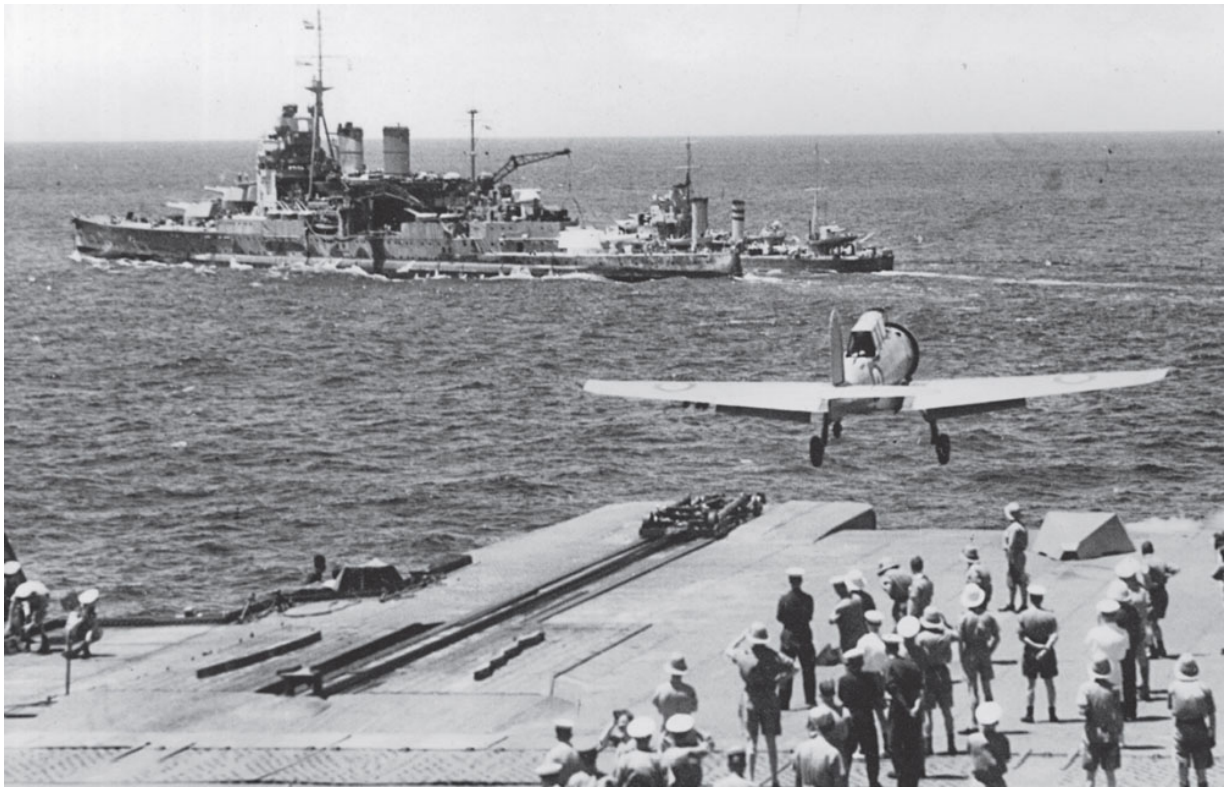
North Atlantic in the autumn was not the productive hunting ground he and the SKL had expected it to be.

On the 14th, the weather improved somewhat and another Norwegian freighter, this time the 1,918-ton *Lorentz W Hansen*, was sighted east of Newfoundland. The papers presented to the German boarding officer by Master Sigurd Berg showed his ship to be carrying 2,000 tons of timber from Canada to Britain, which made her legal prey. The twenty-one-man crew was sent across to *Deutschland* before the boarding party lit scuttling charges and headed back themselves. The huge load of timber kept the Norwegian floating, though, and she was eventually sunk by gunfire and a torpedo at point-blank range. Later the same day, the men from *Lorentz W Hansen* were transferred to another Norwegian ship, the tanker *Kongsdal*, which also was stopped and searched, but left to sail when found to be heading for a neutral port in Denmark.[13]

A few days later, *Kongsdal* was intercepted again, this time by British ships. To check her properly for contraband, the Norwegian tanker was, under protest, ordered into Kirkwall, where she arrived on 21 October. Here, Berg and his men were interviewed by British intelligence officers who reported to the Admiralty there were *two* German raiders loose in the Atlantic – a situation for which the Royal Navy was not prepared. A major redeployment of heavy forces in 'hunting groups' became necessary, drawing reserves away from the Home Feet. The carrier *Furious* was deployed in the North Atlantic with *Repulse* protecting convoys sailing from Halifax to the Clyde, while *Ark Royal* and *Renown* were sent to Freetown to operate off the African coast. Several other groups were organised throughout the sea lanes potentially threatened by the raiders. In all, more than twenty capital ships and heavy cruisers were withdrawn from home waters and the Mediterranean:

Force F: *Berwick* and *York* – North America and the West Indies
Force G: *Cumberland, Exeter, Ajax* and *Achilles* – east coast of South America

Force H: *Sussex* and *Shropshire* – west coast of South Africa
Force I: *Cornwall, Dorsetshire, Eagle* – Colombo
Force J: *Malaya* and *Glorious* – Aden area
Force K: *Ark Royal, Renown* and *Neptune* – Freetown
Force L: *Furious* and *Repulse* – North Atlantic
Force Y: *Strasbourg* and *Hermes* – Pernambuco–Sierra Leone
Force X: 1st Division French 8-inch cruisers – Pernambuco–Sierra Leone



Ark Royal and *Renown* in the South Atlantic searching for *Graf Spee* in the autumn of 1939. A Skua is taking off from the Ark. (Author's collection)

In addition, a French *force de raid* under Vice Admiral Marc-Bruno Gensoul with battleship *Dunkerque*, cruisers *Georges Leygues, Montcalm* and *Gloire*, and eight destroyers were used to cover convoys from the Caribbean and Canada to Europe. This, of course, was part of the *raison d'être* for the raiders: to spread the British surface fleet to the maximum.[14]

On 9 October, aircraft from *Ark Royal* sighted a US tanker, *Delmar*, passing her by, and thought no more of it. In fact, this was the German supply tanker *Altmark*, operating in concert with *Graf Spee*. A month later, on 5 November, the German merchantman *Uhenfels* also tried to escape the interest of Force K, disguised as the Dutch merchant *Aagtekerk*. She had made a number of attempts to sail back to Germany already but was forced to turn back in the face of British patrols and was running low on food and provisions. This was her third attempt, departing Lourenço Marques on 13 October 1939, carrying opium, cotton and hides. On 5 November, *Ark Royal*'s aircraft reported the German ship, and the destroyer *Hereward* was directed to her position. Instead of trying to bluff their way through, the crew attempted to scuttle the ship but a boarding party from *Hereward* was able to prevent this. The captured ship was brought into Freetown the following day, where the sixty-one crew were marched off to a prison camp. Even if these operations in general gave few results, they were invaluable for the aircrews as well as the onboard support crews, both service and maintenance personnel as well as those involved in flight planning and sustainable patrol operations.[15] With *Graf Spee* eventually taken care of, *Ark Royal* escorted the damaged *Exeter* back to Britain, where they arrived in February.[16]

Meanwhile, Kapitän Wenneker had taken *Deutschland* south of the Grand Banks, stalking the main shipping lanes. On 15 October, the Arado was damaged again and nothing but neutral traffic was sighted. The weather was worse than ever and several days of inactivity followed. By now, water and other provisions were also getting low and it was imperative to meet up

with *Westerwald*. On the 21st, *Deutschland* was at ‘Point Green’, the designated meeting point for the period, but the sea was empty. Wenneker even risked sending up the Arado, not yet fully repaired, as well as a brief, coded radio signal to the SKL, requesting news. To the relief of everybody on board, the SKL could report that *Westerwald* was safe and heading for the alternative rendezvous ‘Point Grey’. Here, the two ships met up on 25 October and, when the weather cleared the next day, provisioning and refuelling could commence. It was just in time, as, shortly after, the worst storm ever broke loose. During the extreme conditions damage was sustained: cracks appeared in the superstructure and engine rooms II, III and IV were repeatedly out of action as water entered through poorly positioned ventilation ports.[17]

In Berlin, meanwhile, protests were received from both the USA and Norway regarding the interception of their ships. Hitler, not pleased with the political implications, ordered *Deutschland* home. He was also getting worried that a ship carrying such a prestigious name might be sunk. Raeder argued that the voyage home would be dangerous and advised waiting for even longer nights and poorer weather. B-Dienst reported large groups of Allied warships in the Atlantic and, on 28 October, *Deutschland* received orders to head for Germany during the second week of November, when there would be no moon.[18]

Westerwald in heavy seas in the North Atlantic in 1939. When she was not refuelling or exercising with *Deutschland*, her task was to stay out of sight and wait. (E Skjold collection)

Deutschland seen from *Westerwald* on a rare fine day. (E Skjold collection)

After one last refuelling from *Westerwald*, Wenneker took *Deutschland* through the Denmark Strait and, helped by the atrocious weather, escaped the RAF patrols and the submarines in the North Sea and Skagerrak.[19] On 14 November, the destroyers *Friedrich Eckholdt* and *Friedrich Ihn* fell in off Skagen and, next morning, Admiral Carls, C-in-C Naval Group East, transferred on board from the destroyer *Anton Schmitt* to have a firsthand account of the events. Anchor was dropped at 19:39 on the 16th in Gotenhafen. After twelve weeks at sea, Kapitän Wenneker had little to show but two ships sunk, one captured, and a series of diplomatic complications. Extremely poor weather, difficulty in operating the aircraft and lack of intelligence regarding convoys had made his sortie a misadventure. To keep up the appearance, though, Wenneker was promoted to Konteradmiral before being sent ashore, replaced by Kapitän zur See August Thiele. On Hitler's orders, *Deutschland* was renamed *Lützow* shortly afterwards.[20]

The sinking of *Graf Spee* and the meagre results of *Deutschland* were nasty surprises for Raeder and the SKL. Compared to the success of Dönitz's U-boats, which had sunk a large number of merchant ships, one carrier and one capital ship, the surface raiders were little more than a failure. This was not in accordance with theory, part of which Raeder had written himself. Hitler's faith in the Kriegsmarine as a war-winning instrument slumped. The German surface fleet was nowhere near the size necessary for waging a successful, sustainable war on commerce in the Atlantic. Plans would have to be reassessed and the use of the Kriegsmarine reconsidered.

Deutschland returning to Germany. On 14 November, the destroyers *Friedrich Eckholdt* and *Friedrich Ihn* fell in off Skagen, escorting the *Panzerschiff* to Gotenhafen. (R Gehringer collection)

On 18 February 1940, *Scharnhorst, Gneisenau* and the newly commissioned cruiser *Admiral Hipper* headed into the North Sea with the *Zerstörer Heidkamp* and *Galster*.[21] The operation was codenamed Nordmark and had two objectives. The surface ships were looking for reported convoys from Norway and, as their presence was expected to draw British forces into the North Sea, a number of U-boats were placed between the German fleet and the British bases. Eventually, nine boats were in place between Kinnaird Head and Shetland.

The Kriegsmarine's first major loss. The wreck of *Admiral Graf Spee* off the River Plate. (Author's collection)

With everyone distracted by the *Altmark* incident, Operation Nordmark set off on the wrong foot as fog and ice for once kept the otherwise efficient German reconnaissance aircraft at base. Therefore, Admiral Marschall was operating solely on radio intercepts and signals intelligence. This he did not appreciate and, finding nothing but neutral Norwegian fishing vessels, he turned back during the night of 19/20 February.

Unknown to Marschall, the sortie had been sighted by a British aircraft off Heligoland in the early morning of the 18th. The westbound convoy HN-12 was already nearing Scotland while the next eastbound convoy heading for Norway was held back at Kirkwall to be out of harm's way. Part of the Home Fleet had already taken to sea to screen the operations against *Altmark* and were directed towards the North Sea. Further reconnaissance was hampered by the poor weather, however, and when the submarine *Salmon* reported '*Scharnhorst, Gneisenau, Hipper* and *Königsberg* steering south at high speed' in the morning of the 20th, and *L23* reported 'one cruiser and two destroyers steering south-east' a little later, confusion reigned. Both submarines had to go deep to avoid the escorts and could not pursue. The British lost the trail and turned back before running into the German U-boat lines. By the evening of the 20th, all German ships had returned to port.[22]

— 18 —
Mine Warfare

'Always Bloody Well Sweeping'[1]

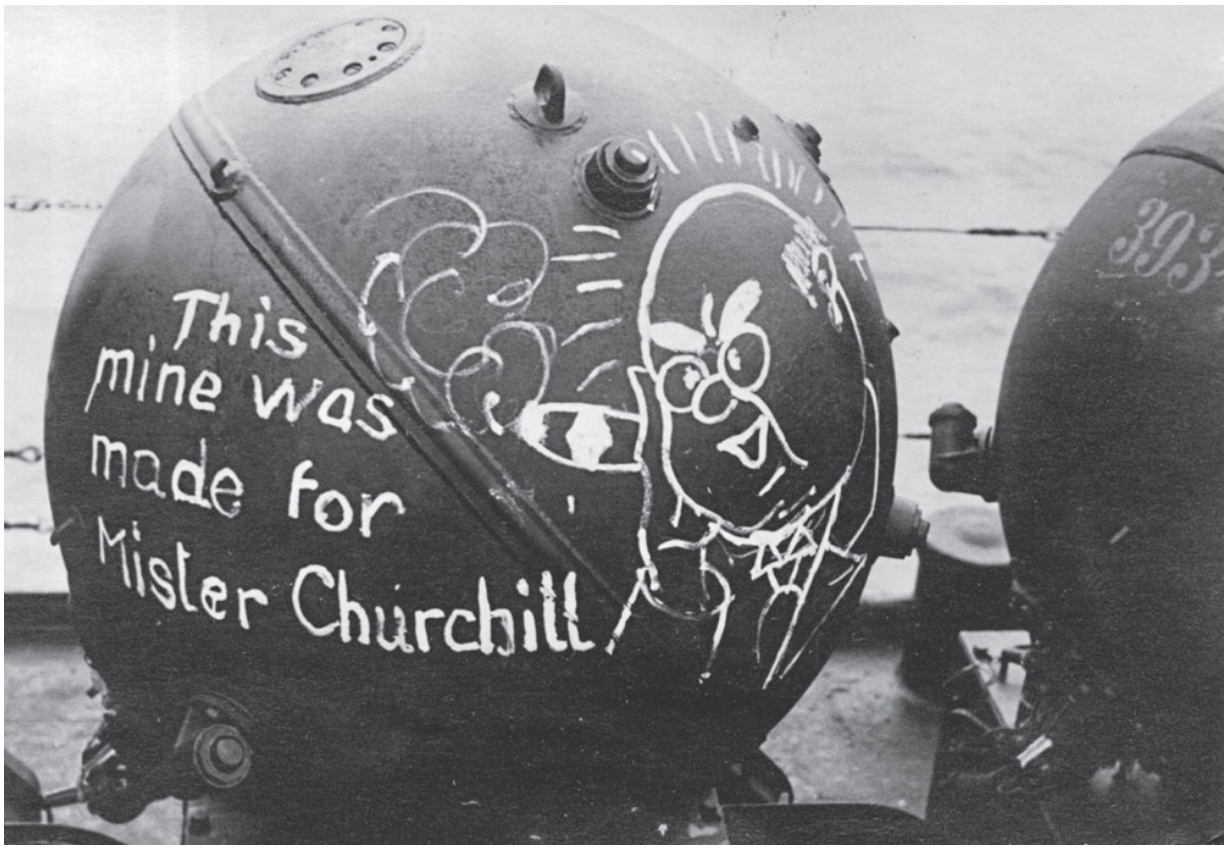
TENS OF THOUSANDS OF mines were laid in and around the North Sea during WWII. Sweeping these required huge resources and countless hours among the belligerents. It was a dangerous and unglamorous task requiring patience and method, but also extreme bravery, and the 'miners' often became highly decorated – if they survived.

At the start of the war, mines were either moored – that is, anchored to the seabed and floating at a pre-set depth – or lying on the seabed. Those resting on the seabed were inevitably influence mines, activated by a ship passing overhead. Moored mines could be influence or contact mines, activated through being hit by a ship. Defensive minefields were laid to protect own waterways or harbour entrances and in most cases made known by officially declaring an area dangerous. Offensive minefields were laid in enemy-controlled waters in order to sink naval or merchant ships and disrupt coastal traffic. These were normally smaller fields, sometimes of only a few mines. Minelayers were in short supply on both sides at the beginning of the hostilities, and civilian ships were hastily requisitioned and rebuilt, generally to lay defensive fields, while equipment was added to fast naval ships or submarines capable of entering enemy waters to lay the offensive fields. Aircraft were also used to lay offensive minefields. According to the Hague Convention, minefields that could pose a danger to non-belligerent traffic were to be made officially known or 'declared'. Usually, a large area was declared, which might contain only a few mines

spread in an irregular pattern or none at all. Over time, the fields were enlarged and/or given an increased density of mines. Deep fields aimed at submarines were not declared.

In most cases, moored mines consisted of a spherical or cylindrical casing filled with explosives and anchored by means of wire to a sinker at the seabed. On the outside of the mine were several ‘horns’ or antennae, which would cause the mine to explode if hit by the hull of a ship. The mine and sinker were usually placed on rails, where the sinker acted as a trolley, to be dropped over the stern of the minelayer. The interval at which the mines were dropped was adjusted to the speed of the ship so that the correct spacing was achieved, usually 30–55 yards or thirty to fifty-five mines per mile. While the sinker descended to the bottom, the mine proper remained afloat as the cable unreeled. When a mechanical sensor recognised that the sinker was nearing the bottom, or at a preset depth, the cable was locked and the mine pulled down to its intended depth, usually 6–16 feet. In lanes where large vessels were expected, the depth of the mine could be adjusted so that it was not wasted on less valuable targets. Anti-submarine mines were laid at various depths, usually through sinking them to the bottom with their sinkers before being released, rising to a preset depth.

According to international standards, mines had to become inert if the wire was cut or if the mine broke off its anchor for some reason. Sometimes they did, sometimes not. Some mines were actually set to go off when swept, in order to damage the opposition’s minesweepers or at least his sweeping gear. To complicate or prevent sweeping, some mines had the upper part of the wires, where the sweeping gear intercepted it, replaced by chains or had small explosive charges attached to cut the sweeps. In other cases, buoys with cable-cutting devices or explosives were laid between the mines.



The surface of a mine could be used by local artists on both sides. (Author’s collection)

British minesweepers were equipped with so-called Oropesa sweeps, in principle largely similar to those used in any other navy at the time.[2] These consisted of two large winches on the quarterdeck with drums carrying special sweep wires with a breaking strength of some 30 tons. In operation, the sweep wires were stretched around 200 yards out and 400–500 yards aft by torpedo-shaped floats. These were normally equipped with a metal flag, usually red, to make it visible from the ship and show that the sweep was running as expected. A multiplane otter or paravane attached to the wire near the float kept the sweep curving outward, while a kite near the ship controlled the depth of the wire in the water. The sweep wires were serrated with barbs of wire protruding to give a saw-like effect and would in principle cut the mooring cables of the mines. This did not always work, and, a few weeks into the war, active cutters were introduced, sometimes fitted with explosives.

With sweep out, the winch aft was always operated by a man ready to release the brake if the wire should suddenly tauten or ‘sing’, indicating that a mine had been caught. A mine snagged on the wire had a nasty tendency of swaying towards the sweeper, endangering men and ship. Similarly, the red signal flag on the float was continuously watched. If it was pulled under, it usually meant a mine had been snagged at the outer end. It was not uncommon for a mine to detonate in the sweep – a so-called ‘foul sweep’ – and, if not necessarily dangerous, it was a stark remainder of the constant dangers to the minesweepers.

German minesweeper displaying its gear on the quarterdeck. The two floats stretching the sweep-wires to each side are hanging from their cranes while the wires are rolled up on their drums. Paravanes and kites to control the wire in the water are neatly stored on each side – as are depth-charges. (Author's collection)

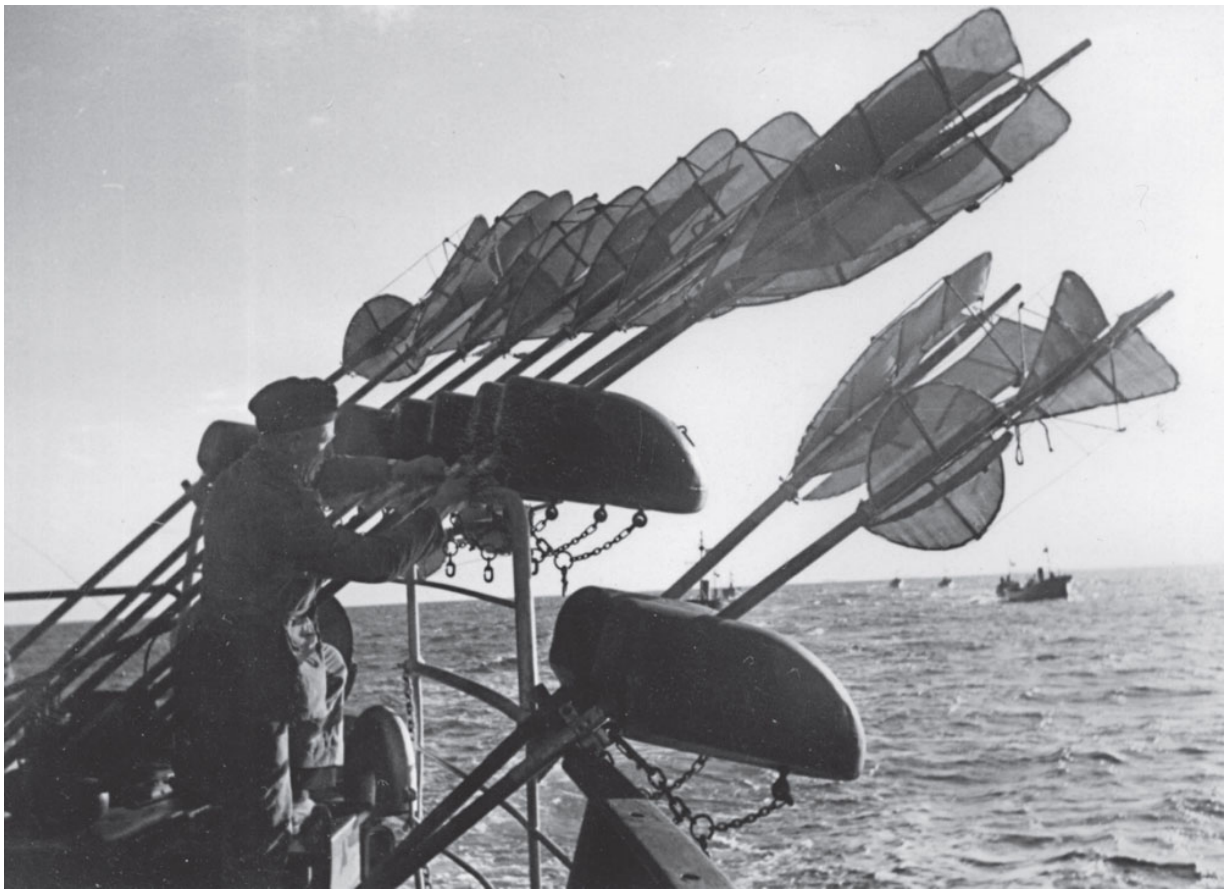
Mines cut and floating at the surface were fired upon, usually with armour-piercing rounds from rifles. A mine would sink if its buoyancy was punctured or blow up if the horns or some other vital parts were hit first. Hence it was necessary for the sweepers to fire from a safe distance, usually at least 100 yards, making it all the more difficult to hit. If the mine was in an area where its explosion was unwanted, it had to be disarmed – at great danger to the personnel doing it.[3]

The minesweepers always operated in pairs or groups of four to eight, depending on the area to be swept and the number of boats available in the flotilla. The most common method of sweeping was the single Oropesa sweep or 'G' formation, using one wire from each vessel, port or starboard. On the signal 'Out sweeps to starboard [or port], station on me' from the leader, the ships would steam one behind the other, en-echelon to the previous, each overlapping the sweep wire of the one ahead. Thus, the area of swept channel was maximised while only the lead ship, normally the senior officer, steamed into unswept waters. The area covered by each ship's sweep was about 1 cable (200 yards) and the distance of one ship behind another was ideally 2 cables (400 yards). When sweeps were out, black canvas or metal spheres were hoisted at the masthead, one to the masthead, the other to the end of the yardarm on the side to which the sweep was set. Dan buoys were usually laid to mark the area swept.

Line-abreast sweeping with both wires out – so-called 'J' or 'K' formations, depending on whether the ships were in one or two rows – were sometimes used as the final check of an area recently swept or with a low likelihood of mines being present. In these formations none of the ships was in clear water. Bow protection gear was fitted to many minesweepers to take mines away from the bow when the ships moved into unswept areas.

A system of so-called 'swept channels' was set up along the coasts of Britain from Portsmouth to Kirkwall, from the Bristol Channel to the Clyde, and onward to the North Channel, and in the Western Approaches to St

George’s Channel. In addition, subsidiary channels branching off towards the main ports were kept clear. The swept channels were marked by lighted buoys along the centre line, at 5-mile intervals, shortened to 2.5 miles in the port approaches. This naturally also told the Germans where to lay their mines, but, as the channels were swept every day ahead of the convoys, the convenience was considered to outweigh the risk. Similar systems were organised along the German coasts. [4]



Buoys with marking flags ready to be dropped along the swept channels, showing where it would be safe to sail. (Author’s collection)

The job of mine-sweeping was vital, but tedious and dangerous. The men, mostly reserves and draftees, would have to go out every morning of every day, performing a task that any second might end in horrible tragedy. For the best part of two years, mine-sweeping trawlers would bear the brunt of the warfare in British home waters until the naval building programme started to catch up. Their losses were staggering and the toll among the British and Allied men serving on board the auxiliaries would be severe from the start. Ewart Brookes, RNVSR officer and captain of a minesweeper, wrote:

> There is something particularly baleful about having to slip from a quay at 4 a.m. on a bitterly cold winter's morning to go out sweeping for mines when one knows that the apparatus with which the mines have to be swept is a dubious quantity. That knowledge, plus the fact that they had been driven remorselessly during the first four months of the war with but little reward for it, began to show in the morale of the crews. It was seldom men off watch went to their beloved bunks on a minesweeper at sea in those days. They had seen too many trawlers lurch as an explosion hit them, had extended a helping hand to too many survivors, and had heard too many stories of those who were below, trapped without a chance of rescue or survival. Once the boom was cleared, one would see the men blowing up their air lifebelts and placing their little treasure-boxes where they would have a chance of grabbing them if the worst came to the worst. When they curled up for an odd hour or two of sleep before the order came 'Out Sweep', they could be found grouped round the funnel base where it was warm, or curled up in an engine room alleyway. […] The minesweeping force was tired.[5]

A separate Mine-sweeping Division (MD) to focus on the mine warfare was established by the Admiralty on 2 October 1939 under Captain Harold Morse. The MD was made responsible for all men, vessels and material, including training and technology, as well as intelligence of German mines in British waters. At this time, German mine-laying in British waters had assumed alarming proportions. Once organised, the division kept a plot of all incidents involving mines, sweeping operations, and known minefields, own as well as known German fields. The collected information was disseminated and advice given to the local commanders regarding counteractions, sweeping priorities, and use of equipment. At each naval

station, a mine-sweeping officer took command of the mine-sweeping trawlers. In his operations rooms a permanent watch kept active plots of minefields, the movement of the sweepers, and ships known to have struck mines.

It is interesting to note that as late as 1 March 1940, C-in-C the Nore, Admiral Drax, stated in a meeting on the traffic routes on the east coast:

> it would be impossible to keep the traffic moving if the enemy effort was intensified by only a small amount. At present we were living 'from hand to mouth' and have no margin […] The enemy has had remarkable success with the mines already laid, and yet no one knows exactly how they were laid.[6]

'Out Sweeps!'

The German *Scherdrachengerät* sweeping gear was not very different from the British Oropesa gear. Cables running out to one or both sides of the sweep vessel were steered by floats, kites and otters and the anchor chains of the mines were cut by scissor-like instruments or explosives. The German sweeps were usually towed at 9–13 knots, covered an area of some 200 yards on either side, and could be set at sweeping depths between 10 and 120 feet. This meant that they could also be used against some of the shallower antisubmarine fields.[7]

A crew from the German minesweeper *M-1707 Lüneburg* approaching a swept mine to disarm it off Hela in the Baltic in December 1939. This was dangerous work, even if the mine was supposed to become inert when the wire was cut.

After it has been disarmed, the mine is hoisted on board *Lüneburg*. Note the horn triggers and the chain that has been cut about 3 feet below the mine. (Author's collection)

The *Bugschutzgerät* bow protection gear was made up of cables attached to a boom protruding downwards from the bow of the ship. This boom was either hinged and could be lowered into the water at a downward angle ahead of the vessel or extended from a built-in tube in the bow. From the head of the boom, cables went upward in the water on each side towards otters, pulling the cables away from the ship. Through this arrangement, mine anchor cables which were caught by the wires of the *Bugschutzgerät* were pulled along the rising cable, away from the bow of the ship, towards cutters near the otters. If the cutters did not work, the mine would explode harmlessly against the otter, which could be replaced.[8] The British paravane was a very similar device.

Being well aware of the dangers of magnetic mines from their own developments, all German warships were demagnetised by 1939. Merchant ships were given the treatment as fast as yard capacity permitted and by 1940 most were cleared.

Before the outbreak of the war, all so-called 'security units', *Sicherungsverbände*, including minesweepers, minelayers, escort vessels, A/S vessels and auxiliaries were grouped under the FdM, who reported to the BdA. At the outbreak of war, two local commands were established, elevated from previous staff positions. In the west, C-in-C Security North Sea (Befehlshaber der Sicherung der Nordsee – BSN), Vizeadmiral Otto von Schrader, was subordinated to Naval Group West in Wilhelmshaven. In the east, the BSO, Vizeadmiral Hermann Mootz, was subordinated to Naval Group East in Kiel. In January 1940, minelayers and A/S vessels were grouped under Flag Officer Special Forces (Führer der Sonderverbande – FdS), East and West, respectively, reporting to the BSN or BSO. The position of FdS West was held by Kapitän zur See Kurt Böhmer, while FdS East was held by Kapitän zur See Arnold Bentlage. Minesweepers and escort vessels remained directly under the relevant BS commanders.[9] The

technical development of mines and mine-sweeping equipment rested with the Sperrversuchskommando (SVK) under Kapitän zur See Erich Müller.[10]

Minesweepers usually operated in groups, each ship with its special position and task in the sweep. These are German sweepers operating in the Baltic in early 1940 – *M-1705 Nürnberg* is the nearest. (Author's collection)

During the inter-war period, the German navy had mine research high on the agenda and, by the outbreak of war, several types were available for mass-production: contact mines as well as advanced types with magnetic and influence triggers. The German naval command failed to see the offensive potential that their advanced mine technology had developed, however, and the potential of mines as an offensive weapon was never fully exploited. Instead, priority was given to the traditional defensive use of mines.

During the last week of August 1939, a number of pre-identified civilian vessels were requisitioned by the Kriegsmarine and hastily equipped as minelayers. In the North Sea, the vessels *Cobra, Kaiser, Königin Luise* and *Roland* were deployed to the BSN.[11] In the east, *Hansestadt Danzig, Preussen* and *Tannenberg* were deployed with the BSO.[12] Except for the 5,500-ton *Tannenberg*, the other ships were around 2,500 tons, steam or diesel driven, manoeuvrable and with speeds of around 15–18 knots: hence they were well suited for mine-laying and were quickly converted to commence their new task.[13]

Among the new equipment were rail tracks along the decks for easy storage and laying of the mines, cranes for hoisting them on board, bow sweeping gear and a few 88-mm guns and machine cannons for self-defence. Most of the sailors and officers already on board the ships were drafted into the Kriegsmarine and kept on board, supplemented by regular NCOs and specialists. The peacetime captains were made navigation officers and replaced as commanders by ex-naval officers, recalled from the reserve. This made the minelayers rather special, being largely without naval discipline, but still efficient, well-run ships where most of those on board went to their tasks with enthusiasm – initially, at least. By 2 September, most ships were in commission, but not necessarily operational.[14]

In the Baltic, the first mines were laid by the newly commissioned *Hansestadt Danzig* and *Tannenberg* on 4 September (see Chapter 6).[15] In the North Sea, a huge area, known as the 'German declared area' or the Westwall, was announced as early as 3 September. It covered a rectangle from just west of the Ems Estuary past Horns Reef towards the Great Fisher Bank, protecting the approaches to Hamburg, Emden, Wilhelmshaven, Bremerhaven and Cuxhaven. At 03:35 on 5 September, the minelayers *Roland* and *Cobra* left Cuxhaven, supported by the destroyers *Erich Giese* and *Theodor Riedel*, heading for the Heligoland Bight.[16] The minelayers carried 233 mines each, the *Zerstörer* 100. By 10:00 in the morning, the first 666 mines of the Westwall had been laid. During the next three weeks, several fields, totalling some 4,000 regular EMC/EMD mines and UMA antisubmarine mines, followed inside the Westwall area.[17]

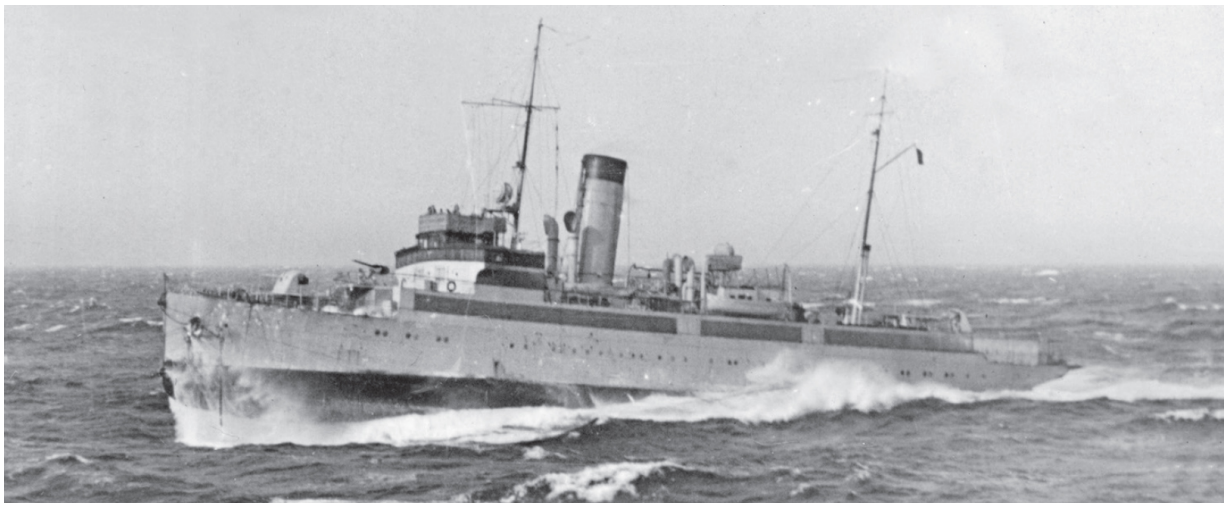
A narrow sea lane existed between the southern end of the field and the Dutch West Frisian Islands; otherwise the entrance to the Bight was from the north, from the Skagerrak. In reality, the Westwall was not one field, but a series of overlapping 'mine stripes', over twenty in all, inside the declared area, making it impossible to sail in a straight line from east to west or north to south. Each stripe consisted of two to three hundred mines, interspaced with numerous *Sprengbojen* – explosive cutting devices – to prevent sweeping. Below the regular mines, a network of anti-submarine mines made a three-dimensional death-trap. New stripes were added at intervals to maintain the effect of the declared area and to catch Allied ships trying to sneak through. Since the Westwall was far offshore, exact positioning was sometimes difficult and the start and end point of a few of the stripes were several miles from the initially intended position.

For those who knew where the stripes were, it would be possible to navigate through the Westwall. In particular, two diagonal routes were established, Weg I and Weg II, used by naval ships and U-boats to and from the southern North Sea. After a while, a chesslike game developed, with the

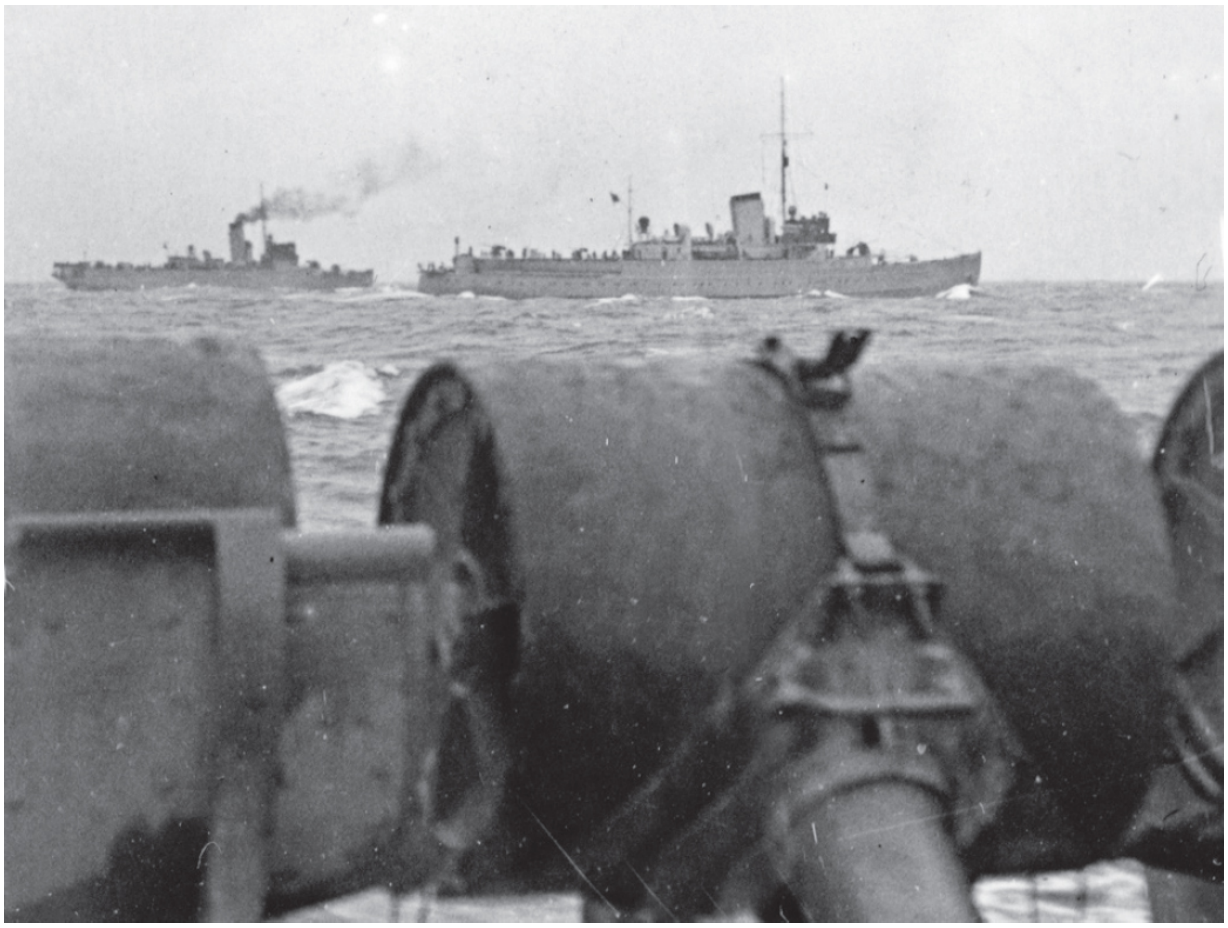
British trying to close the routes without the Germans knowing it and the Germans trying to keep secret where the routes actually were. In an attempt to keep Weg II open, a fake stripe was laid across its western exit in such a way as to be observed, to try to confuse the Royal Navy.

The minelayers *Kaiser, Grille* and *Hansestadt Danzig* were temporarily transferred to the BSN during mid-September, having completed the initial fields in the east, to accelerate the laying of the Westwall. Kapitän zur See Bonte, at the time commander of 2nd Destroyer Flotilla, was in charge of most of the mine-laying operation in the west at this time, and one or more of the destroyers from 2nd or 3rd Flotilla usually took part in the mine-laying. Torpedo boats of the 6th T-Flotilla and S-boats of the 1st S-Flotilla added to the escort.[18]

During October, the fear that British and French submarines would enter German harbours and anchorages rose, especially after Kapitänleutnant Prien had taken *U47* into Scapa Flow. Hence, *Cobra* and *Roland* were temporarily assigned as guard ships to oversee the A/S nets off the Jade and Elbe estuaries. *Kaiser*, which was well armed, acted as A/A ship at the Brunsbüttel locks before she and *Königin Luise* were transferred to the Baltic to assist the BSO and act as merchant raiders during October.



Minelayer *Cobra* taking it green in the North Sea. Note the guns on the foredeck. (Author's collection)



Minelayers *Cobra* and *Roland* in the Heligoland Bight on 5 September 1939, laying the first mines of the Westwall. (Author's collection)

The new FdS West, Kapitän Böhmer, was eager to show results, but sea-ice in the Bight prevented him taking *Roland* and *Cobra* to sea until 7 January, when *Cobra* laid a small anti-submarine field off the island of Borkum. On the 28th, both ships laid a total of 476 UMA mines in an extensive anti-submarine barrier off the Ems Estuary and, in early March, similar fields were laid around Heligoland Island. After that, the ships remained at anchor, fully loaded with mines, in Wilhelmshaven for the rest of the month, pending orders for their role in support of Operation Weserübung. In the early morning of 8 April, they were joined by *Preussen* and *Königin Luise*, coming through the Kiel Canal, and all ships took to sea, laying the two first rows of mines in the Skagerrak, covered by eight *M-bocks* of the 2nd MS-flotilla. Within days, several overlapping rows were laid, rendering the entrance to the Skagerrak very hazardous.[19] Meanwhile, *Hansestadt Danzig* was used as troop transport, landing German soldiers in Copenhagen in the morning of 9 April.[20]

At the start of the war, the Kriegsmarine had a list of fifty-eight ships from 3,000 to 9,000 tons suitable for conversion to *Sperrbrecher*, a concept unique to the Kriegsmarine. The *Sperrbrecher* were intended as minesweepers sailing ahead of other vessels through minefields: sweeping, but also detonating any mines along their path.[21] The bow of the *Sperrbrecher* was strengthened and the cargo holds usually filled with buoyant material to increase the chance of survival in case of hitting a mine. Most of them were equipped with electrical spools in the bow, intended to detonate magnetic mines well clear of the vessel. Also used as convoy escorts and anti-aircraft ships, the *Sperrbrecher* were well equipped with A/A guns and often identified as ‘flak ships’ by British airmen. Later, the *Sperrbrecher* were extensively used to escort U-boats in and out of harbour.

Needless to say, the *Sperrbrecher* suffered heavy losses. Twelve *Sperrbrecher* were requisitioned in the first batch and taken to naval yards in Hamburg for conversion. Resources were prioritised elsewhere, though,

and when they were commissioned, equipment such as guns, iron ballast and electronics were missing, not to mention trained naval men to operate what would be a rather complex multi-purpose vessel. Upon completion of the first round in the yard, the *Sperrbrecher* were deployed in four groups, one in the Baltic and three in the North Sea. The first British mines were not set off by a *Sperrbrecher* until mid-April off Denmark: it was clearing the way for the transport convoys to Norway after the invasion.[22]

Magnetic Menace

From September to December 1939, German mines in the the North Sea and/or in British waters accounted for eighty-six ships, amounting to 310,000 tons. Of this loss, 25–30 per cent was the result of mines laid by U-boats. During November, mines were responsible for an increasing proportion of the total Allied and neutral losses. From January to early April 1940, another fifty ships for a total of just under 200,000 tons went down due to mines, of which about half were the result of U-boat-laid hardware (see Appendix A); 30 to 50 per cent of the ships foundering on mines were neutrals.[23]

A number of the ships that went down had obviously hit a regular contact mine, confirmed by subsequent sweeping. Some of the explosions occurred in relatively shallow water of 65–100 feet, and there was no evidence that a mine had been in contact with the ship at the time of the explosion. Contrary to standard contact mines, which usually blew a large hole near the bow of the ship, these explosions seemed to have been underneath the ship, breaking its back, making a mess of the boilers and engines and denting the hull plates, breaking open welding seams or riveted joints. Holes were rare, and small if they occurred. Sweeping sometimes produced contact mines, sometimes nothing. Churchill wrote:

During September and October, nearly a dozen merchant ships were sunk at the entrance of our harbours, although these had been properly swept for mines. The Admiralty at once suspected that magnetic mines had been used [but] without a specimen of the mine it was impossible to devise a remedy.[24]

In December a further twenty-four vessels were lost to mines: eleven in two large contact minefields off the river Tyne, thirteen to what appeared to be magnetic mines. Britain was in peril. Efforts to sweep the magnetic mines were unavailing and one harbour after another was obstructed; the coastal traffic ground to a halt.

On 20 September, *U27* was sunk off the Hebrides. When they were interrogated, some of the survivors held that all German submarines were fitted for laying magnetic mines. Though not strictly true, it confirmed to the Admiralty that a new, unprecedented danger was at hand. Establishing the nature of the new mines would be vital.[25] The German use of magnetic mines should not have been unanticipated by the Admiralty. A British patent for such a device had been filed as early as 1918, but the technology had not been pursued and effective, large-scale use like that of the autumn of 1939 was not foreseen. The Kriegsmarine considered the magnetic mines unsweepable and, if laid strictly according to instructions, unrecoverable. The Royal Navy would therefore not, it was believed, learn how the triggers worked and would therefore not be able to neutralise them other than through trial and error.

Laid on the seabed, magnetic mines reacted to the distortion of the earth's magnetic field caused by a passing ship. Though only minor forces were involved, it worked reliably against average-sized ships in water depths usually not exceeding some 100 feet. Damage was inflicted by the shock wave propagating though the water, rather than through direct contact, unlike a moored mine, which on contact blew a large hole in the ship, usually forward. The magnetic mine exploded underneath the ship, its shock wave causing great damage in the interior and often breaking the keel of the unlucky vessel.

It was early on considered by the Kriegsmarine that the magnetic mine had a high potential, and three types were developed: one for the cradle system of the surface ships, one to be laid from U-boats and one to be dropped from aircraft. The trigger was identical in all cases. The mines were ready for production from late 1936. Due to the prioritisation of resources in the armaments industry, production of mines in general and magnetic mines in particular suffered, however, and only a limited quantity of mines was available at the outbreak of war.[26]

In addition to the moored TMA impact mine, the U-boats also carried TMB magnetic mines from mid-September 1939. In late 1939, the even more powerful TMC magnetic mine also became available with a 1,000-kg (1-ton) warhead for water depths of up to 120 feet. The TMB and TMC mines were activated by the magnetic fields generated by the metal hulls of ships passing above. The triggers were found to be too sensitive, though, often blowing up when smaller vessels passed over them. Such sinkings had less military or commercial value, not worth the risk and effort of putting the mines in place. To try to compensate, the U-boat crews started to de-magnetise the mines before dropping them to reduce the sensitivity of their triggers.[27]

To increase the number of sinkings, the SKL suggested that aircraft were to supplement the U-boats laying mines in British waters. Göring, always wary of inter-service rivalry, at first denied all use of aircraft for mine-laying. Only after the first results of the U-boat-laid mines had been documented did he yield, allowing mine-laying sorties to be flown by He59-and He115-equipped Küstenflieger units and, later, limited use of some He111-equipped units.

Two varieties of air-dropped mines were available: the 520-kg Luftmine Typ A (LMA) and the 945-kg Luftmine Typ B (LMB). Both were dropped from 500 feet by parachute and, after this had opened, the mine would descend at around 20 metres per second. The triggers of the magnetic mines

were shock-sensitive and required a fairly large parachute to ensure a slow descent. This made the accurate positioning of the mines challenging for an inexperienced aircrew. Landing on land or in shallow water, the safety detonator would destroy the mine within thirty seconds. If it landed in water, the mine would sink and, as it passed 8 feet, water pressure and the dissolving of a water-soluble plug would deactivate the self-destruct mechanism and activate the magnetic detonator.

During November 1939, the first magnetic mines were airdropped in the Humber and Thames estuaries. These sorties were flown from bases in the east Frisian Islands and due to the long distances involved few mines could be carried by each aircraft. The He59 could carry four LMAs, but on most sorties this was reduced to two LMAs or one LMB and two extra fuel tanks.[28] To facilitate navigation, two or three aircraft usually operated together, crossing the North Sea at maximum height and approaching the British coast in a gentle dive with engines idling to avoid being detected. Navigation over such long distances at night was an issue for the inexperienced crews of these units and there was always a relatively large number of aircraft that did not reach their target.

From mid-December, sea-ice prevented the Küstenflieger aircraft from taking off and it would be April 1940 before they commenced flying again, by which time most of the units were looking to take part in the invasion of Denmark and Norway.[29]

Table 18.1: Mine sorties flown by Küstenflieger units in 1939

Date	*Unit*	*Aircraft*	*Mines dropped*
20 Nov.	3./906	He59	7 LMA – Thames 6, Harwich 1
21 Nov.	3./906	He59	10 LMA – Thames 4, Harwich 4, Downs 2
22 Nov.	3./906, 3./106	He59	24 LMA – Thames 14, Dunkirk 8, Downs 2
06 Dec.	3./906, 3./106, 3./506	He59	18 LMB – Thames 13, Humber 5
07 Dec.	3./906, 3./106	He59	10 LMB – Downs 10
		Total	69 mines: 41 LMA, 28 LMB

On 21 November, the first definite reports of German mine-laying from aircraft arrived in the Admiralty. What were believed to be He115 floatplanes had been seen to drop what looked like 'sailors' kit-bags suspended from parachutes' in the Humber and in the estuaries of the Stour and the Thames. Officers from HMS *Vernon*, the Royal Navy's Torpedo and Mine Warfare School at Portsmouth, were sent to the east coast to investigate, but could provide no further information and there was no conclusive evidence as to the nature of the mines.

In the evening of 22 November, one of the He59 aircraft was disturbed by machine-gun fire from an A/A position near Southend pier while dropping mines in the Thames Estuary. The weather was poor and, losing his bearings during evasive actions, the pilot nevertheless dropped his load, resulting in both LMAs landing in shallow water at the mudflats near Shoeburyness. For some reason, the self-destruct mechanisms in both mines failed. The parachutes were observed and it was assumed that they had brought down German airmen. The patrols sent to apprehend them, however, found a strange cylinder attached to the first parachute, which they wisely left alone, blocking off the area. A report was quickly sent to the Admiralty where two render mines safe (RMS) officers, Lieutenant Commanders John Ouvry and Roger Lewis from HMS *Vernon*, were standing by for just such an occasion. They were told that the mine would have to be recovered at any cost and dispatched forthwith to Shoeburyness. Arriving during the night, darkness and pouring rain barred any work, but

the mine was secured against the incoming tide, photographed and assessed briefly by torchlight. While the tide was high, a plan was made and on the morning of the 23rd, when the device was exposed again, Ouvry returned with Chief Petty Officer Charles Baldwin, who had arrived from *Vernon* during the night. Lewis and the rest of the team remained well clear.

With pockets emptied of anything metallic and using non-magnetic tools produced specifically for the task, the two men proceeded to render the mine safe. They found it to be cylindrical, around 7 feet long, with spokes on the nose and a hollow tail containing a massive bronze spring for projecting the parachute.[30] There were two sinister fittings near the fore end. One was evidently a hydrostatic valve; the other could not be identified. It was made of polished aluminium and secured by a screwed ring sealed with black wax. To Ouvry, the latter seemed most likely to contain the primer and detonator and he decided to take this on first. The aluminium fitting was unscrewed with the utmost care, after which it was possible to raise the fitting, disarming the mine. Confident that this had rendered safe the principal detonator, Lieutenant Commander Lewis and Able Seaman Vearncombe were called to help turn the mine so that the fittings hidden by the sand could be reached. This they accomplished without mishap and a second detonator was discovered, of a type similar to that of the regular horned mine.

With the mine safe for transport, it was hoisted onto a lorry and hurried off to HMS *Vernon* for detailed investigation. Meanwhile, a report was sent to the Admiralty that a mine had been recovered intact. During the day, the second mine was found less than half a mile from the first and this was also rendered safe. Through incredible luck, the Admiralty's Directorate of Torpedoes and Mining (Investigations) (DTMI) now had two mines to study, including their magnetic triggers, and countermeasures could be developed.[31]

Mines Reported in the Fairway[32]

The sweeping of magnetic mines with Oropesa swipes was pointless. There were no cables to cut and the minesweepers themselves were at the same risk as any other vessel: all the more so as the mines would have to be set off to be neutralised. Experiments with magnetised bars hanging on a wire floated between two wooden drifters were not very successful, creating more tangles than exploding mines, giving the device the telling name 'Bosun's Nightmare'. Another device known as a 'skid' was more successful but had its challenges too. This was simply a wooden raft towed some 500 feet behind a drifter. A generator on board the ship powered electrical coils mounted on the skid via a cable, creating a magnetic field equal to that of a 20,000-ton vessel. The skid was usually destroyed by the mine it set off, but at the cost of no lives they were easy to replace. The drifter was supposed to be safe, but in a following sea the skid tended to get close to the ship towing it, creating an unwelcome risk for the minesweeper.[33]

On 20 January, the 7,800-ton motor tanker *Caroni River* activated one of the mines laid by *U34* the day before in Falmouth Bay (see Chapter 10). At the time she was carrying out paravane trials and defensive armament tests and had a dozen naval observers on board, experiencing the ordeal first-hand. All were picked up by the Falmouth lifeboat and had much to tell Lieutenant Fredman Lincoln of the DTMI, who was sent to investigate:

> In the report we had from the Minesweeping Captain on the staff of the Naval Commander-in-Chief at Plymouth, there were a number of puzzling features, the most striking of which was that the tanker had been blown up in a channel to the south-west of Falmouth Bay which had been regularly swept and was supposed to be clear of mines […] Captain Hodson, the Minesweeping Captain [and I] drove over to Falmouth where the survivors from the *Caroni River* had been assembled at the naval base. I questioned them all. When I completed my interrogation, I was convinced that their ship had been sunk by a magnetic mine. If this was so, we were faced with a new problem. So far, all magnetic mines appeared to have been dropped by enemy aircraft. But there had been no reports of any aircraft in the vicinity of Falmouth, nor had there been any trace of the big parachutes by which they were

dropped into the sea. The most likely alternative explanation was that the mine had been laid by a U-boat.[34]

Obviously, if a U-boat had entered Falmouth Bay to lay mines it had not laid only the one which had sunk the *Caroni River*. Lincoln and Hodson decided to board a trawler the following night, trying to re-enact what the U-boat captain would have seen through his periscope and how he might have placed the other mines. Using the lighthouse at St Anthony's Head and drawing a line through the wreck of the *Caroni River*, they could make a fair guess at the position of the rest of the mines. Sweeping started at first light the following morning using a skid, towed behind a trawler.

The main snag with this method was that, since the trawler was in no way protected, she might set off the mine before the skid reached the spot. Apart from that, each time a mine was successfully exploded it usually meant the destruction of the skid. This was nothing compared with the loss of merchantmen, but even so […] an expensive method of sweeping and one that wasted a great deal of time, for the water covered by each barge was only the width of the beam of the barge.[35]

Hodson had a number of skids available in Falmouth, though, and set about sweeping the mines as agreed, while Lincoln returned to the Admiralty. Their anticipation of the operational modus of Rollmann and *U34* turned out to be spot-on and, in all, eight mines were safely detonated. The tide was about to turn.[36]

Introduced in December 1939, the LL (or Double L) device would be the most effective method for sweeping magnetic mines and was extensively used throughout the war. It consisted of two electric cables encased in a buoyant rubber covering, one long leg, around 550 yards long, and one short leg, around 220 yards long, towed behind a demagnetised vessel. Heavy electric currents were passed through the cables, emitting a pulsating magnetic field, setting off any mines nearby. Usually, the minesweeper was at a safe distance, but worn cables or weather conditions at times made the mines go off uncomfortably close. The LL sweep was relatively easy to tow and when it set off a mine, it just flexed away from

the cascading waters, continuing its task effectively a few moments later. Wear and tear could be repaired and, although leaks in the cable cover at times resulted in sinking cables, the LL was much preferred by the mine-sweeping crews compared to ‘nightmares’ and skids.

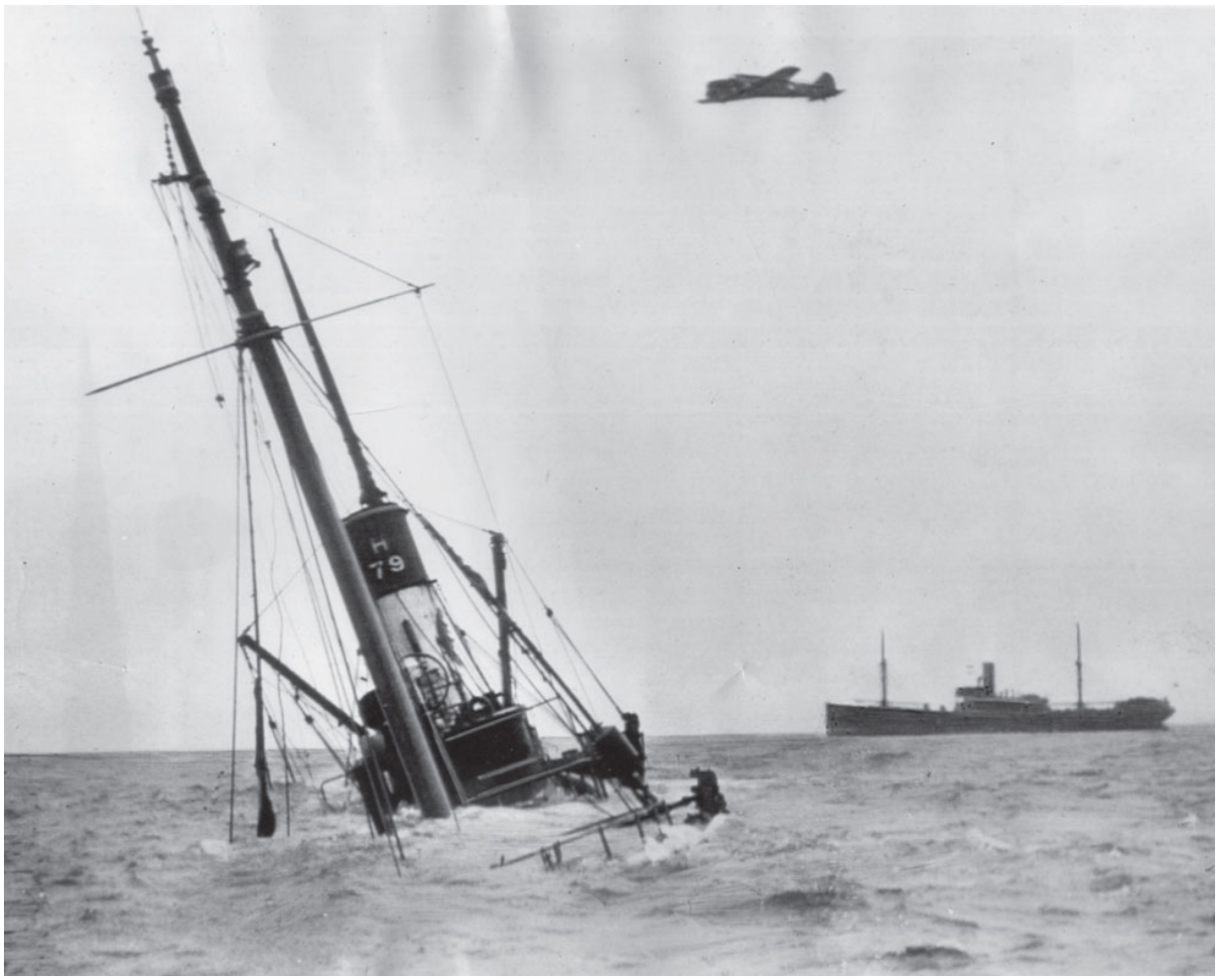
Another workable but rather bizarre solution was developed in order to produce a magnetic field strong enough to set the mine off ahead or abeam the minesweeper, far enough away not to destroy it in the process. The 2,900-ton old collier *Borde* was found ideal as she, like most colliers, had machinery aft with spacious holds forward. A powerful electromagnet, weighing some 500 tons, was fitted into *Borde*’s forward hold. The electrical power needed was supplied by a massive diesel generator, taking up most of the after hold. Sending currents through the coils in pulses, alternating magnetic field components were created – in theory exploding the mines at some distance from the ship.

Borde was commissioned by Lieutenant Commander Roland Hudson in December 1939 and sailed for her first test at Barrows Deep off the Downs in early January. Steaming slowly, at about 5 knots, just sufficient to give steerage way, tension on board was notable. The observers from DTMI were smiling, though, when on 4 January a terrific explosion some 50 yards ahead of the ship drenched it in immense amounts of water. *Borde* and her crew were considerably shaken by the blast – most crockery and glass on board broke and the knife switches that put electricity through the windings of the magnet blew open. Damage was not substantial, though, and once the switches had been put back again, she was ready to continue. Several mines were set off in the following days and though *Borde* eventually took damage, Churchill was elated, calling her ‘the most valuable ship in the navy’. German magnetic mines could for the first time be swept in a reasonably sustainable way. After a refit, including a makeshift bridge aft to be as far away from the explosions as possible, *Borde* continued her dangerous work, destroying a total of twenty-three mines within a couple of

weeks. Meanwhile, other colliers were similarly equipped and eventually a fleet of some ten ships operated as mine destructor vessels.[37]

The Admiralty scientists studying the mines from Shoeburyness soon confirmed that the German detonators responded to the magnetic field of ships passing overhead. Reversing or reducing a ship's magnetic field using an electric current passing through cables encircling the hulls should, therefore, in theory, make them immune to the detonators. Research on this actually existed from pre-war times and was now retrieved with some haste. Since the German unit of strength of the magnetic field in the triggers was the gauss, the processes of demagnetising a ship became referred to as 'degaussing'. The German magnetic triggers were sensitive and, under the right conditions, large or broad-beamed vessels could still set off a magnetic mine in spite of being degaussed, depending on the water depth.

The original method of degaussing was to install electromagnetic cables around the ships, known as coiling. Coiling all naval and merchant ships was impractical and an alternative simpler method called 'wiping' was developed. Through this, an electrical cable was hauled up the side of the ship with about 2,000 amperes flowing through it, rendering the magnetic field of the ship neutral or with a slight bias not noticed by the triggers. The effect did not last, though, and had to be repeated every few months. In January, February and March, losses from mines stabilised at sixteen, fifteen and eighteen, respectively (see Appendix A), of which probably less than half were from magnetic mines. The main reason for the reduced losses to magnetic mines in this period were active sweeping as well as the reduced number of new mines being actually laid. Degaussing and other measures had not yet begun to give any quantifiable effects.[38] Hence, in spite of numerous successes, the German mine campaign against Britain in the first year of the war did not achieve what it might have done. There are two main reasons for this.



The mines are perilous to all. The wreck of British minesweeper *Aragonite*, which struck a mine in the Channel off Deal on 22 November 1939. (Author's collection)

First was the inability of the German leadership to utilise the technical and tactical advantage they undoubtedly had. Too few surface ships, U-boats and aircraft made available to deliver the mines and too few mines, especially of the magnetic type, meant the Royal Navy was never totally overwhelmed, even when matters looked grim. As usual, the Kriegsmarine came third when asking for resources. Active cooperation between the Kriegsmarine and Luftwaffe laying mines in multiple locations, replenishing older fields, believed by the Royal Navy to have been swept, could well have saturated the British defences early on, but this was not to be. In few places is the lack of a united German command with one strategic goal, focusing means and resources, better demonstrated in this period than in the issue of mining in British waters. Had the available U-boats been deployed fully throughout the winter, had aircraft been made available and used actively from September, and had the use of fast surface vessels been optimised, the situation might have been very different in the spring of 1940.

Secondly, the outcome of the early mine war was decided by the British ability to develop and launch effective countermeasures. Above all, the swift introduction of the convoy system and the commissioning of the trawlers and drifters for mine-sweeping was crucial – in spite of the sometimes ineffectual deployment of the mine-sweeping forces and the lack of coordination.

'Stand by to Lay Mines'

The British mine-laying policy at the outset of the war concentrated on protective minefields in own coastal waters and in the Channel. At first, priority was given to the Dover Barrage, delaying the establishment of other barrages. In due course, though, defensive fields were established off the east coast, across the Bristol Channel, in the Thames Estuary, the Firth of Forth and the Clyde Estuary. Strategic minefields between the Faeroes and

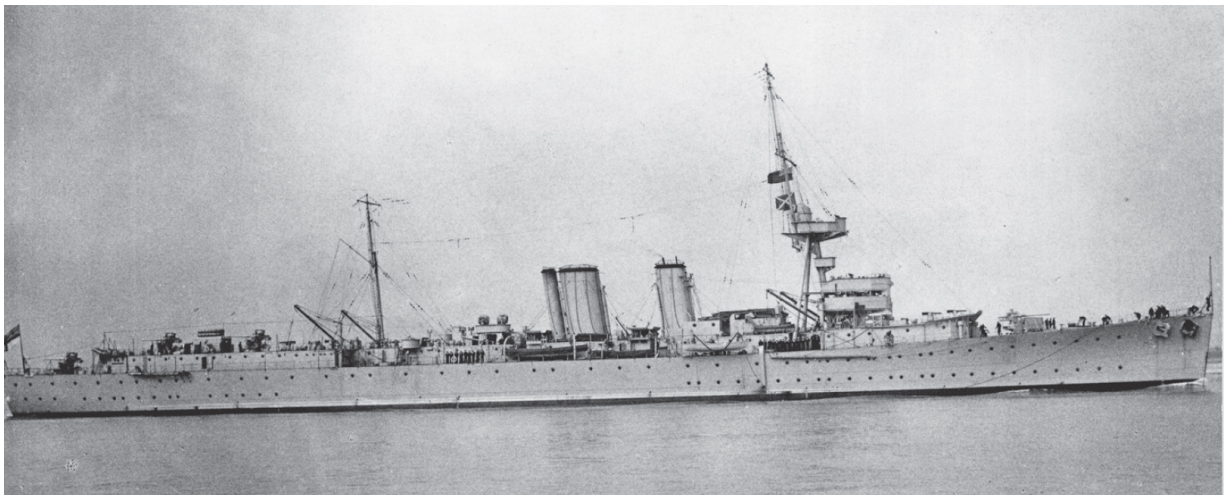
Iceland and across the North Sea from Scotland to Norway, the so-called Northern Barrage, were also suggested by Admiral Pound, but since the German occupation of Norway occurred before sufficient mines could be assembled, minefields were eventually laid between the Orkneys, Faeroes and Iceland.[39]

Commissioned in 1926, the 6,740-ton mine-laying cruiser *Adventure* was the first purpose-built minelayer of the Royal Navy. She was also the first British warship to have diesel-electric engines for cruising in addition to the regular turbines, the propellers being run by either machinery through gearboxes. Her design was determined by a requirement for a large mine capacity carried internally, speed, and a significant cruising range. The 280 mines were stored and dropped from four sets of rails running the length of the ship.[40] Other minelayers operating in British coastal waters in the first part of the war were *Plover, Hampton, Shepperton, Princess Victoria* and *Teviot Bank*.[41]

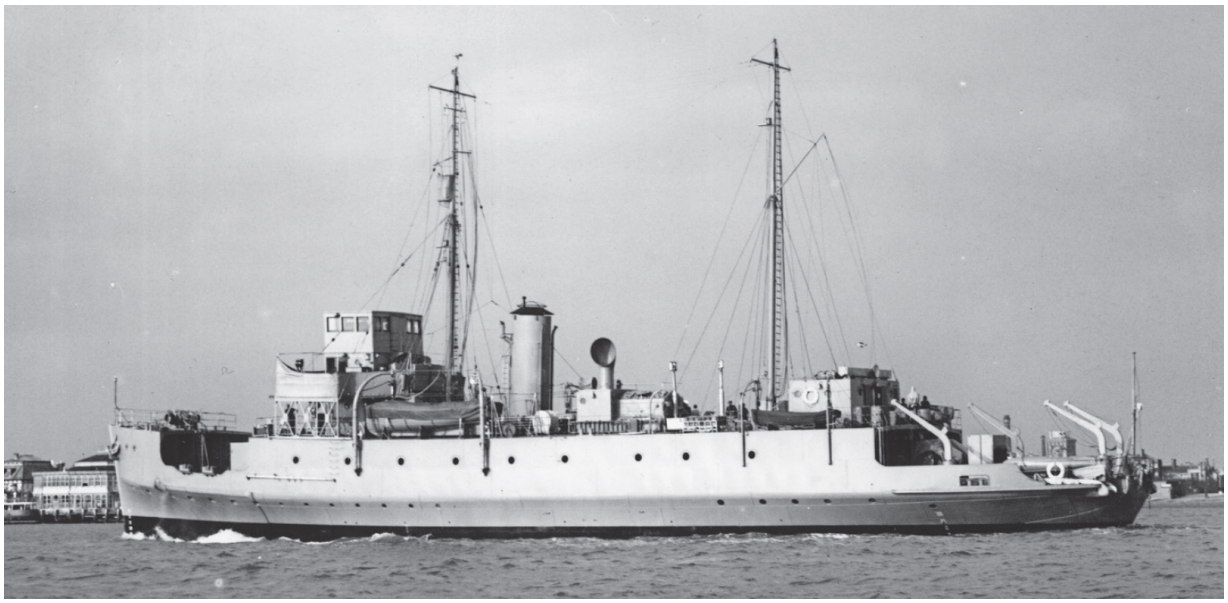
The very first mines in British waters were laid by *Plover* as early as the afternoon of 3 September in the Firth of Forth off Bass Rock, protecting the entry to Rosyth and Edinburgh, in Operation BRM. This small field was completed the next day, after which *Plover* headed south.

Following some preparatory surveying and positioning of guiding beacons, the laying of the Dover Barrage by *Adventure, Plover, Hampton* and *Shepperton* commenced on 11 September. By the 16th, a total of 3,119 mines had been laid, completing the first phase of the Dover Barrage. The main elements of the barrage were a combined shallow–deep minefield from the Goodwin Sands to the Ruytingen Shoals and a deep field from Folkestone to Cap Gris Nez, leaving the coastal areas open for traffic. Between the fields, there were two lines of indicator loops from Dover to Calais. A force of some twenty-five A/S trawlers was set up to patrol the area, of which twelve were assigned to the loops. Off Folkestone, a gate between two lightvessels was established for the convoy traffic, with deep

mines laid under the searched channel south-westward from the gate. These defences, which effectively closed the Channel to German U-boats, were progressively expanded over the first part of the war, eventually consisting of around ten thousand mines. The French contribution was limited to inside a 10-mile zone from their coast.[42]



British minelayer: *Adventure* (Russel)



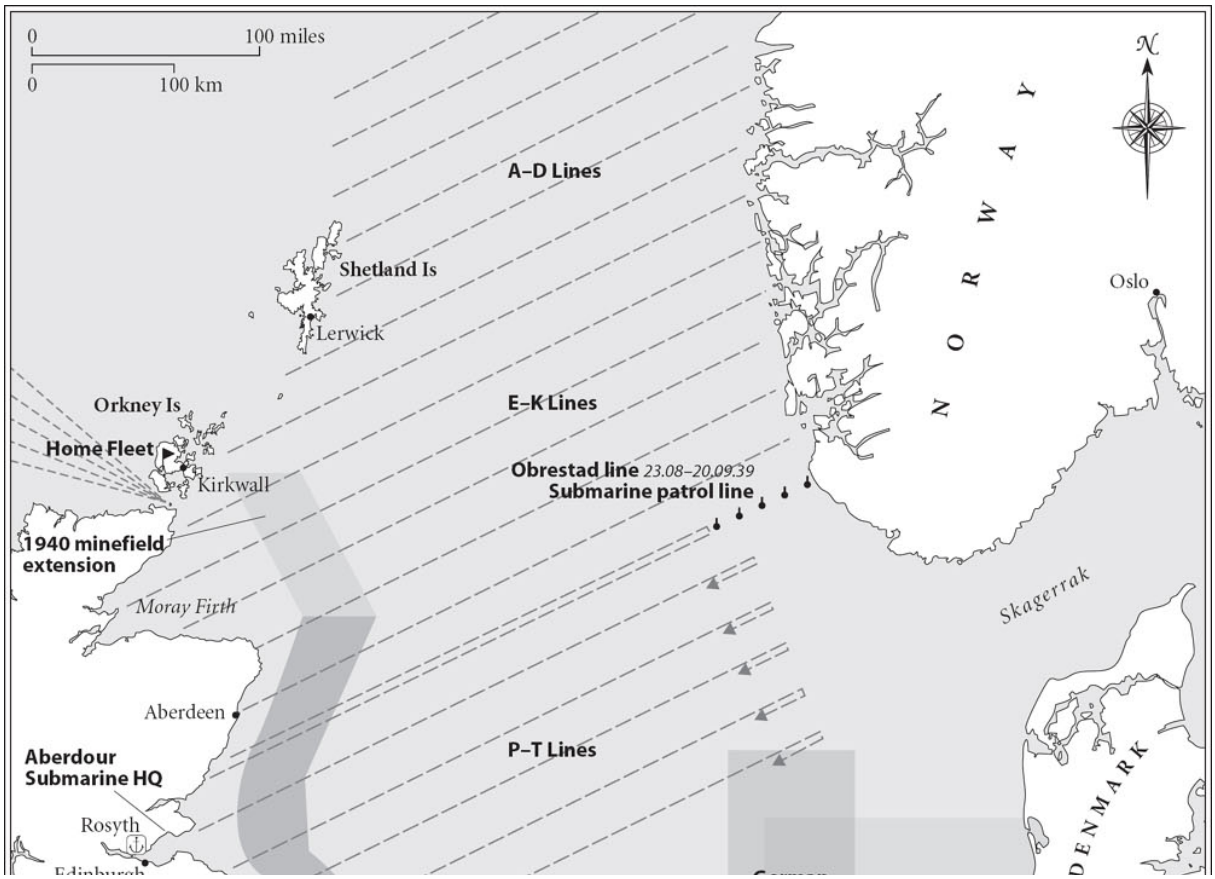
British minelayer: *Plover*. (W&L)

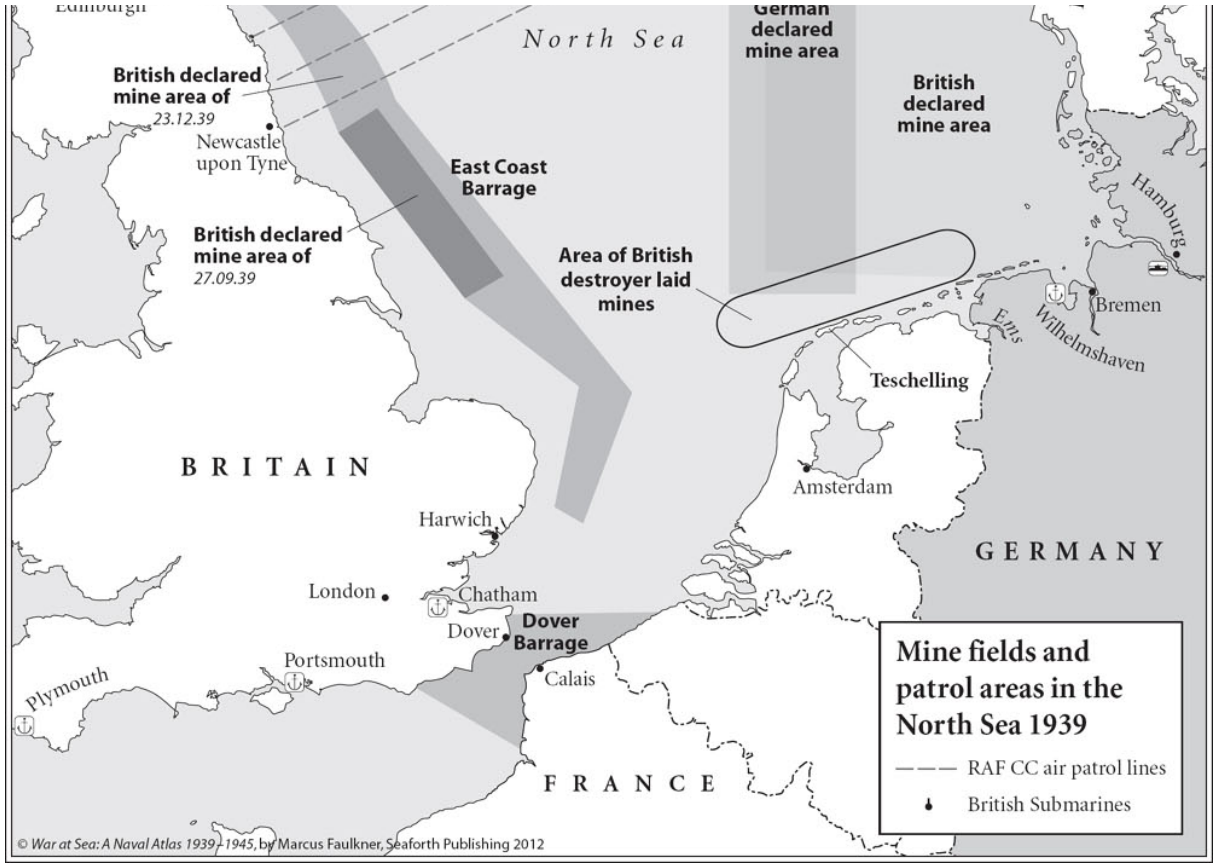
The moored magnetic mine M MkI was available from September 1939, mainly intended for defensive anti-submarine fields. Offensive ground magnetic mines were also being developed, but given secondary priority to the moored types.[43]

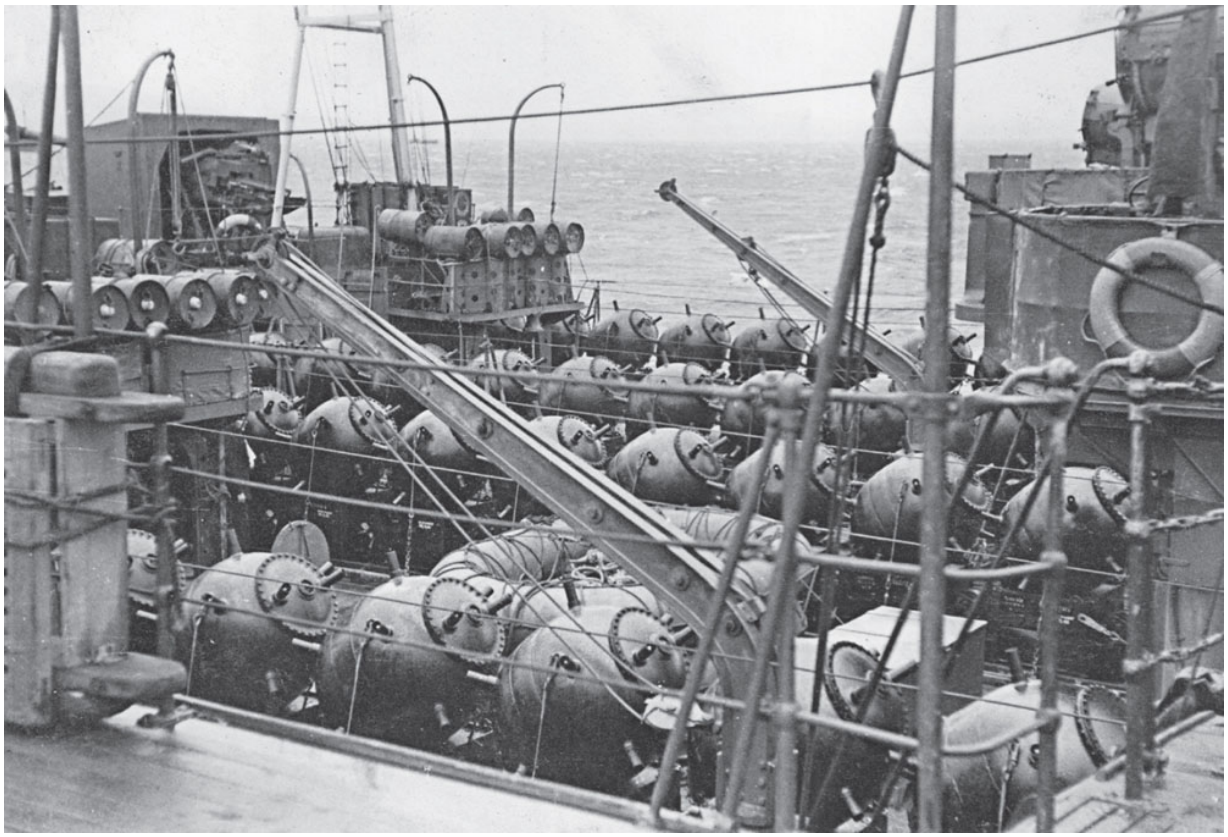
On 27 September the East Coast Barrage was declared by the Admiralty off the Yorkshire coast between 53º 50' and 55º 00' N. Once it could be released from Dover, *Adventure* was deployed laying the first mines inside the declared area. It would take a long time before anything like a barrier had been established, not least because deep fields were also laid, without being declared, to catch U-boats trying to sneak in underneath the publicised field.[44] Priority was given to an undeclared anti U-boat field off Flamborough Head, and the first short lines of the East Coast Barrage proper were not laid until October. In November, further deep fields were laid off the Thames Estuary. Later, this area was also declared a proper minefield, and shallow mines added. On 23 December, the extended East Coast Barrage was declared from the Thames Estuary to Rattray Head – 51º 36' to 58º 20' N – 'to safeguard all shipping against enemy minelaying and exercise a firmer control over shipping with the objective of preventing the laying of mines by enemy ships disguised as neutrals'.[45]

Loading mines onto destroyer *Ivanhoe*. (D Briggs collection)

At the outbreak of war, six modern British destroyers were designated for offensive mine-laying: *Intrepid, Ivanhoe, Icarus, Impulsive, Esk* and *Express*. The latter two were ready for deployment, while the four I-class ships were taken into yards during the winter of 1939/40 for conversion to minelayers. This meant having their A and Y guns removed as well as torpedo tubes and mine-sweeping equipment before mine rails and discharge gear was fitted to the after decks, giving them a capacity of sixty mines each. In addition, two large derricks were placed on the B gun deck, one each side, with a boom in the stem to handle the bow sweeping gear. At first, *Esk* and *Express* were placed directly under C-in-C Home Fleet. In early December 1939, after *Intrepid* and *Ivanhoe* had been converted at Chatham, the four minelayers formed 20th Destroyer Flotilla with *Express* as the flotilla leader. *Icarus* and *Impulsive* joined in early 1940 when their conversions were complete.[46]




North Sea
German declared mine area
British declared mine area
British declared mine area of 23.12.39
Newcastle upon Tyne
East Coast Barrage
British declared mine area of 27.09.39
Area of British destroyer laid mines
Hamburg
Bremen
Ems
Wilhelmshaven
Teschelling
BRITAIN
Amsterdam
GERMANY
Harwich
London
Chatham
Dover
Dover Barrage
Portsmouth
Calais
Plymouth
FRANCE
Mine fields and patrol areas in the North Sea 1939
RAF CC air patrol lines
British Submarines
© War at Sea: A Naval Atlas 1939–1945, by Marcus Faulkner, Seaforth Publishing 2012



Intrepid and *Ivanhoe* loaded with mines, probably for one of the ID-operations in mid-January 1940. (D Briggs collection)

Esk and *Express* laid the first 120 British mines in the Heligoland Bight on the night of 9/10 September just south of the German Westwall (Operation AA). Two nights later, this was followed by an additional 120 mines further west and just inside the declared area (Operation QQ). Difficult navigation and doubts about the accuracy of the intelligence as to where German mines had actually been laid temporarily postponed further operations.

A few months later, improved intelligence was available, partly from British submarines, partly from signals analysis of German minelayers, and on the night of 17/18 December, *Intrepid* and *Ivanhoe*, laid 120 mines in the approaches to the Ems Estuary (Operation IB). On this occasion, 1st Flotilla acted as support, sweeping for U-boats west of the Westwall. No German ships were encountered by either group and all eight destroyers returned safely.[47] Further mines were laid by *Intrepid* and *Ivanhoe* on the night of 2/3 January (Operation EW), again supported by destroyers of 1st Flotilla, as well as during Operations ID1 and ID2 in mid-January 1940. A third operation, ID3, was cancelled due to bad weather. *U54* was probably lost around 20 February to mines laid during the ID operations. On the night of 2/3 March (Operation IE), *Express, Esk, Icarus* and *Impulsive* laid 240 mines in the so-called Field No. 7 north of Terschelling to block a suspected U-boat passage through the Westwall. *U44, U50, U1* and later *U25* were in all likelihood sunk by mines in Field No. 7.

During 1939, 360 British mines were laid off the German west coast, all by surface vessels.[48] In 1940, this was increased to 830, plus fifty laid by submarines, in addition to some 500 mines laid in the Skagerrak and Kattegat by submarine and aircraft.[49]

Mine-laying in German waters by British submarines did not commence until April 1940. To strike back at the Kriegsmarine, mine-laying from aircraft was initiated by the Admiralty. The Swordfish aircraft of Lieutenant Commander Robin Kilroy's 815 Squadron FAA, mostly survivors from the

sinking of *Courageous*, were transferred to Bircham Newton in Norfolk in early 1940. From here, they would fly their 'Stringbags' across the North Sea to the seaways off Wilhelmshaven and the Jade Estuary, equipped with one A Mk I magnetic mine, just recently released for operational use, and a huge long-range fuel tank in the centre of the cockpit. Plans for a large attack on Wilhelmshaven with torpedoes and magnetic mines were never activated, but between mid-March and May 1940 at least twenty-nine mine-laying night missions were flown, laying magnetic mines in the fairways off north-west Germany. Lieutenant Charles Lamb later wrote:

> Each trip across the North Sea was as frightening as the last. […] Creeping up the Frisian Island Channel at 85 knots […] in the cold dark hours before dawn, I was flying right behind Robin [Kilroy] at about one hundred feet above sea level, concentrating on his dim blue lights which we all carried on our wing struts either side of the aircraft aft. They were very difficult to see unless one flew close to the aircraft ahead. […] Laying those enormous mines required very accurate navigation, which was [Lieutenant Commander Chapman, the Senior Observer's] responsibility. When laying them, the squadron flew in line astern and on arrival off the island of Texel, he would make Robin lead us around in a wide circle at our dropping height of sixty feet, until he was quite sure that he had plotted an accurate fix. […] The method of laying the mines was simple but practical. A few moments before reaching the beginning of the area to be mined, standing up in his open cockpit and facing aft, Chapman would flash a series of dots at us with a blue shaded torch, meaning 'stand by', which would be repeated all down the line by the observers in the rear cockpits. The mines were dropped by the same push-button on the pilot's throttle used for dropping the torpedo and we would sit with thumb poised, eyes glued to the aircraft ahead, […] and when 'Chappers' flashed his I would drop mine. [Observer Dick] Janvrin would count ten, then flashed his torch, the aircraft astern would drop theirs and so on, right down the line.[50]

In all, between 250 and 300 mines were laid, and acting upon intelligence of mines having been swept or set off, some missions were used to replace the holes in fields already in place. After the German invasion of Denmark and Norway the demand for mine-laying operations rose. By this time, though, 815 Squadron had embarked *Illustrious*, and aircraft of the Bomber and Coastal Commands took over the mine-laying sorties.[51]

German countermeasures against magnetic mines had been designed well before the outbreak of the war. The so-called *Voraus-Eigenschutz* or VES (forward self-protection) consisted of electrical spools to be installed in the bow of *Sperrbrecher* and was effective against magnetic mines. Otherwise, the cumbersome *Seekuh*, a set of cable-connected iron bars in floats towed behind the minesweepers was the standard equipment used against magnetic mines in the early part of the war. To the relief of the mine-sweeping crews, this was gradually replaced by electrically magnetised sweeping cables and a more widespread use of onboard electrical spools. By the time 815 Squadron began laying mines in German waters, a large number of VES-equipped *Sperrbrecher* and auxiliaries were in service and the magnetic mines never became such an issue for Germany as it had for Britain.[52]

Minesweeping sloop *Hussar* of the 5th Minesweeping Flotilla. (Author's collection)

To Serve their Country[53]

The dangers of mine-sweeping were many and constant, as documented by the 5th Minesweeping Flotilla.[54] On 20 November *Hussar* and *Salamander* had an eventful day off the Humber Lightvessel, as recounted by *Hussar*'s commanding officer, Lieutenant Commander Trevor Crick:

> The channel was searched by *Hussar* and *Salamander* in H formation with double Oropesa sweeps, ships 5 cables apart, 5 fathoms of float wire, 15 fathoms of kite wire, and 250 fathoms of sweep wire. The Northern half of the channel was swept on the outward lap, and the Southern half on the return lap. At about 13:10, a mine exploded in *Hussar*'s Port sweep. About a cable further on a second mine exploded in *Hussar*'s Port sweep. A passing trawler was requested to drop a dan-buoy in a position between the two explosions, which she did. […] Two mines were then cut approximately ½ mile from the dan buoy, one in the Port and one in the Starboard sweep. At about the same time *Salamander* cut one mine. […]. The sweep was continued to the end of the channel and the aforementioned trawler was requested to keep the mines in sight and shipping clear of the position. Sweeps were got in at the end of the channel. *Salamander*'s sweep was all clear, but there was a mine jammed in the sixth cutter of *Hussar*'s sweep, 50 fathoms from the otter. This was observed as the cutter came to the surface. The winch was stopped and put to veer, and as sweep started to veer the mine exploded. It was 5ft under the surface, and 10 yards from the stern. There was no damage to the ship apart from broken glass etc., but she was severely shaken, neither were there any casualties to personnel.
>
> *Salamander* was detailed to destroy two of the three cut mines, and to get photographs and a description of the third, which was left on the surface in case it was desired for recovery. She was also detailed to keep Westbound shipping clear of the minefield. *Hussar* proceeded to recover her parted Port sweep wire, float and otter. The Starboard float was broken in two at the tail welded joint by the explosion in the Port sweep. *Hussar* then kept Eastbound shipping clear of the minefield. In the absence of a reply to a request for instructions as to mine recovery, and because it was getting dusk, *Salamander* was ordered to destroy the remaining cut mine at 16:00. […] When *Salamander* had destroyed the mine, she discovered another of the same type, about 3 cables away, which she also destroyed. Therefore although only 6 mines were seen to be cut it is probable that four were cut, making a total of 7 destroyed, 3 in the sweep and 4 on the surface. The charted depth of water where the mines were cut was 7 and 8 fathoms. […] After dark *Hussar* and *Salamander* continued to keep shipping clear of the minefield during the night until *Hussar* sighted *Sphinx* at 06:45.[55]

A few months later, at dawn on 3 February 1940 *Sphinx, Speedwell* and *Skipjack* of the same flotilla had just set their sweeps some 15 miles off

Kinnaird Head in the Moray Firth when attacked by Ju88s of 2./KG30. Two of the aircraft focused on *Sphinx*, spraying the minesweeper with their machine guns to unnerve the A/A gunners while coming in low to drop their loads. It appears that the minesweepers were insufficiently prepared for the eventuality of an air attack and there were too few men available at the guns to raise an effective barrier in time. Hence, the German pilots pressed home their bombing runs with devastating boldness, all the more so as several of the guns that did open fire jammed after a few rounds.[56]

At 09:12, one bomb struck *Sphinx*'s forecastle, going through the front of the bridge and upper deck, exploding on the forward mess deck. The explosion folded the deck of the forecastle onto the bridge, crippling the entire fore end of the ship. Five men were killed, including Commander John Taylor, while six were seriously wounded. At least four other bombs dropped in subsequent attacks missed, one exploding less than 30 yards away.[57] *Skipjack* was also attacked, but no bombs hit, although one was a very near miss. Before leaving, the aircraft machine-gunned the minesweepers extensively, but no further serious casualties were sustained. At least one of the aircraft appears to have been hit, but no losses are reported.[58]

The crippled *Sphinx* was taken in tow, stern first, by *Speedwell* at 10:50. During the day, conditions became difficult, with a gale-force wind making the sea very rough. Still, the men left on board *Sphinx* were confident that the forward bulkheads would hold and the tow would reach harbour safely, and they did not consider taking any of the wounded or unnecessary men off the ship. Early in the afternoon, the tow parted, but *Skipjack* managed to get a replacement wire attached shortly after and the ships continued at an agonisingly slow 2 knots towards lee behind Kinnaird Head. During the day the minesweeper *Harrier* also arrived to assist, while destroyers *Boreas* and *Brazen* were screening.

3 February 1940: the minesweeper *Sphinx* crippled by bombs during an attack by Ju88s of 2./KG30 off Kinnaird Head in the Moray Firth. *Harrier* standing by.

The bomb struck *Sphinx*'s forecastle, going through the front of the bridge and upper deck and exploding on the forward mess deck. The explosion folded the deck of the forecastle onto the bridge, crippling the entire fore end of *Sphinx*. (NA-ADM 1/10785)

During the afternoon, the weather deteriorated further and, at nightfall, the tow parted again. This time *Harrier* tried to get a wire on board, but failed to secure tow in the rough conditions and *Sphinx* drifted rather helplessly with insufficient engine power to hold her stern to the increasing seas. Instead, the starboard passage was filling up as the waves broke over the fore ship, giving the minesweeper a 20–30-degree list to starboard. At about 01:00, Lieutenant Anthony Nicholls in charge on board *Sphinx* asked for a ship to go alongside to evacuate the wounded. *Speedwell* was the nearest ship and made two attempts to go alongside but decided there was a great danger that she might actually sink her consort and pulled away as *Sphinx* confirmed she was 'comfortable' at the time.

At 03:00, though, conditions had deteriorated further and Nicholls signalled he wished to abandon ship. Lieutenant Commander Brian Clark of *Harrier* ordered *Speedwell* to proceed alongside and evacuate the ship's company. *Skipjack* was to keep to leeward of *Sphinx* to pick up boats or survivors in the water while Clark moved *Harrier* to windward and, laying beam to sea, discharged oil while affording the greatest possible lee and using her searchlights to illuminate the scene.

This time *Speedwell* managed to get alongside *Sphinx*, taking off four men. At about 03:40, destroyer *Boreas* joined the rescue effort while *Brazen* remained screening. *Speedwell* lay off to give the sturdier and more manoeuvrable *Boreas* room and in a remarkable feat of seamanship, in spite of a full south-easterly gale and very high seas, *Boreas* took off seven men directly from alongside *Sphinx* while rescuing another thirty from the water. Lieutenant Commander Michael Tomkinson wrote:

I received from *Speedwell* 'Stand by *Sphinx* abandoning ship now' […] and between 03:30 and the time that *Sphinx* turned over I went alongside 3 times and took off 7 men. On the first two occasions I only took off one man each time but on the third succeeded in getting 5. The sea at the time was very heavy. *Sphinx* had a big list to starboard and the men to start with were very reluctant to jump for my forecastle which I estimate was moving up and down some 15 feet. On the second occasion I sustained some slight damage to my bow. On the second and third times of going alongside a line

was got into Sphinx and on the third attempt an effort was made to float a Carley raft between the ships but under the weather conditions then prevailing I could not hold *Boreas* up into the wind so we drifted too far apart. […] Having turned I found that *Sphinx* had foundered and I went to windward of the largest group of men that I could see and drifted down on them. By 05:15 I had picked up 30. One man subsequently died. As far as I know only two men of those I had alongside were not picked up, […] reflecting credit on the men engaged on this operation. Many men at considerable risk went over the side on bowlines to pass lines around the men in the sea as the only way to get them inboard.[59]

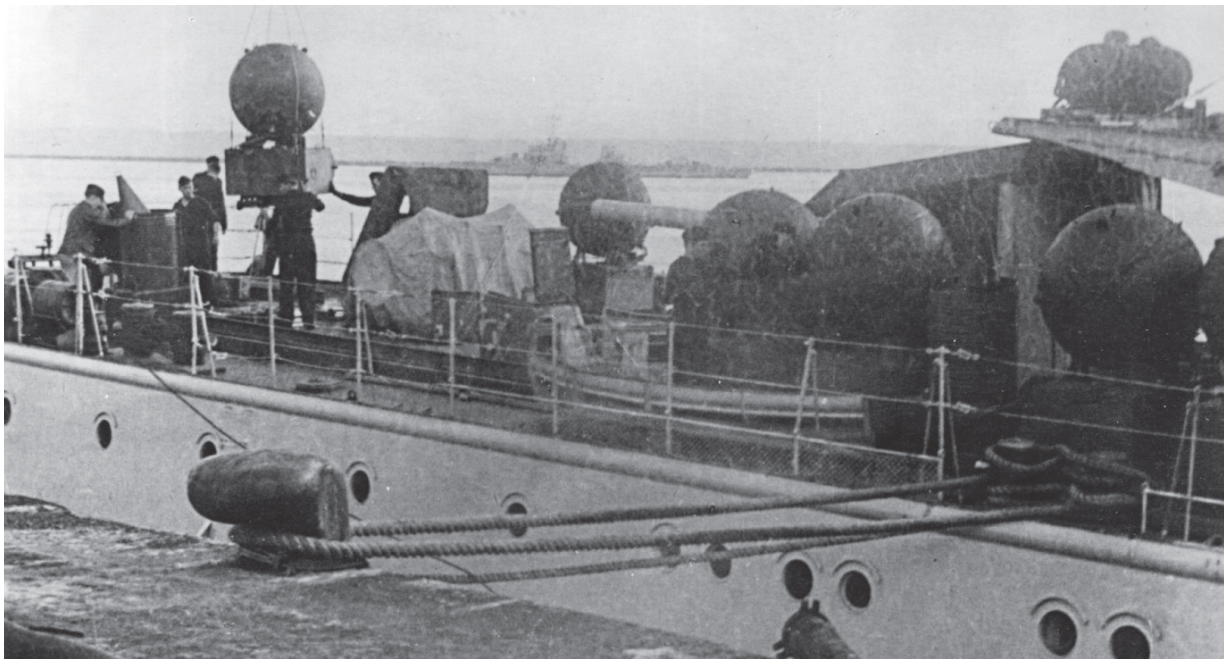
Eventually, a series of large waves hit the hapless *Sphinx* broadside and at 04:55 she capsized 10 miles off Clyth Ness.[60] Five officers and forty-nine ratings were killed in all, some choking from the oil that had been dumped in an attempt to suppress the waves. Lieutenant Nicholls was not among the survivors. The wreck of the *Sphinx*, minus her bows, was swept ashore beneath the cliffs north of Lybster.[61]

— 19 —
Night Stalkers

A Terrific Explosion

FROM THE VERY START of the war, there was disagreement between SKL and Group West over the deployment of the *Zerstörer*. Basically, Group West believed that the destroyers should be conserved for operations as part of the fleet, while the SKL wished to give them a more independent role in commerce warfare in the Skagerrak and the North Sea, and mine-laying in British waters.[1] To prove its point, the SKL decided to initiate a series of offensive mine-laying destroyer sorties on the British east coast. These were carried out as the nights started to grow longer in October 1939, usually laying mixed fields of magnetic and contact mines off the main ports and in the convoy channels. Remarkably, not one of the operations was detected by the Royal Navy.

The German destroyers could carry sixty EMC/EMD mines each and this, combined with their high speed, made them ideal for nocturnal sorties across the North Sea. Normally, the *Zerstörer* left the Jade during the afternoon, steering courses so as to be ready to pass through the Westwall minefield just after nightfall, and then heading across the North Sea at maximum speed. By the next morning, they would be approaching the barrier again and were, on most occasions, met by light cruisers or torpedo boats to escort them back into the Jade.



Loading mines onto a German *Zerstörer* in preparation for a mission to the British east coast in the autumn of 1939. (Author's collection)

Kapitän zur See Friedrich Bonte was appointed Führer der Zerstörer in October 1939. He hoisted his flag on board *Z21 Wilhelm Heidkamp*. (Author's collection)

The first offensive mine-laying sortie took place on the night of 17/18 October, when FdT Konteradmiral Lütjens took six destroyers out of Wilhelmshaven, heading west through one of the openings in the Westwall. His flagship, *Wilhelm Heidkamp*, would act as cover and did not carry mines; the other five had a full load. The mines were laid in the Humber Estuary, and the small fleet returned at high speed, arriving safely back in the Jade in the afternoon. Somewhat to their surprise, the *Zerstörer* were not challenged, either from sea or air, at any time during the sortie. Within days, ships started going down off the Humber, proving the value of the concept.

The sortie also triggered a major restructuring in the Kriegsmarine. Admiral Boehm, C-in-C of the Fleet, held that such offensive use of the destroyers required cover from battleships and cruisers. SKL considered stealth and speed to be vital and air cover by the Luftwaffe would be sufficient. This debate went deep into the tactical use of the navy's meagre resources – all the more so as there were continued technical challenges with the complicated German machinery – and involving more ships would inevitably mean less-frequent sorties. To solve the issue, Boehm was replaced by Admiral Marschall as Flottenchef. At the same time, Lütjens was promoted to Vizeadmiral and appointed BdA, moving with his staff and flag to the light cruiser *Nürnberg*. Kapitän zur See Friedrich Bonte, the new FdZ, hoisted his flag on board *Heidkamp* in late October.[2] In spite of these changes and the official reasons for them, the SKL did provide cruiser support for some of the mine-laying sorties until *Nürnberg* and *Leipzig* were torpedoed by *Salmon* covering a force returning from a mission off Newcastle (see Chapter 15).

The second mine sortie, Bonte's first as FdZ, did not run quite as smoothly as the first. An initial attempt on the night of 8 November was aborted as, just after departure, *Künne* reported water contamination of the fuel and the whole flotilla turned back. Four days later, in the afternoon of the 12th, they were ready again, and Bonte on board *Heidkamp* led *Giese,*

Riedel, Schoemann, Lüdemann, Künne and *Galster* out of the Jade once more. Halfway across the North Sea, *Riedel* reported problems with the port propeller shaft and had to turn back, unable to exceed 12 knots. Shortly after, *Schoemann* asked for permission to turn back as well due to a faulty valve. Bonte, always conscious of his men and ships, accepted this and ordered *Giese* to leave also, escorting her two consorts home. After this, things went as planned. Covered by *Heidkamp, Lüdemann, Künne* and *Galster* laid their mines in the Thames Estuary, including magnetic mines in between the regular moored ones. Patches of fog made the navigation challenging, but it also sheltered the German destroyers and, once again, the operation went undetected. The following afternoon, all *Zerstörer* were back in the Jade, unaware that they had already scored their first success.

Zerstörer Z21 Wilhelm Heidkamp. (Author's collection)

At the same time as the German destroyers prepared to depart Wilhelmshaven on 12 November, the British destroyers *Blanche* and *Basilisk* were preparing to escort the mine-laying cruiser *Adventure* from the Humber to Portsmouth. *Adventure*, having been delayed for twenty hours by the non-arrival of her escort due to fog, eventually sailed from Grimsby at 09:32 on the 12th with the two destroyers in company. Visibility was poor, between 1 and 2 miles, and, as the buoys at Sunk Head and Gunfleet Sands could not be sighted, Captain Arthur Halfhide decided to drop anchor in the Barrow Deep in the evening. During the night, the fog lifted and at 03:05 on the 13th the ships weighed and proceeded to sea. This means that the British ships were literally waiting while the *Zerstörer* laid their mines.

Captain Halfhide decided not to stream paravanes until clear of the Thames Estuary as he considered the risk of encountering mines in these waters less than actually losing the paravanes in the shallows. At 05:06, nearing the Tongue Lightvessel, the water was opening and orders were given to reduce speed and prepare to slip the paravanes. This took some time as one of the wires fouled; twenty minutes later:

There are few photos from the nocturnal mine-laying operations off the British east coast. These were taken on board *Wilhelm Heidkamp* while crossing the North Sea, most likely the one on 10/11 January 1940, heading for Newcastle – see Appendix H. (Author's collection)

at 05:26 an explosion occurred just before the bridge on the port side. *Adventure* was then 3.1 miles from the Tongue Light Vessel with *Basilisk* and *Blanche* in line ahead. […] The fore bridge was wrecked; the standard compass and Eversheds being uprooted and the bridge roof collapsed. All instrument lights on the bridge went out. No communication with the Engine Room, either by telephone or telegraphs through the lower steering position – the position in use – could be established as no answer could be obtained from the voice pipe to the lower steering position. The port siren was operating at full blast and rendered verbal communication on the upper deck almost impossible. All bridge telephones were inoperative. The ship started turning slowly to starboard. All Officers and men on the bridge were temporarily stunned by the force of the explosion or by blows received from falling instruments.[3]

Twenty-three men were killed. Convinced the explosion was due to a mine and not a torpedo, due to the darkness of the night, Halfhide stopped his ship to prevent her going into a minefield and called *Basilisk* to stand by while the damage was assessed. The destroyers confirmed there were no Asdic contacts and boats were turned out and floats prepared for abandoning ship should this become necessary. By 07:15, the casualties had been transferred to the *Basilisk*, the list had been reduced and *Adventure* was ready to proceed under her own steam using the after steering position. It turned out that the fuel had been contaminated, though, and it would take another hour before the fuel system had been cleared and the ships could come under way. At 08:25, however,

an explosion was observed directly under the stern of *Blanche* and she was seen to lower a boat which went away in her wake. My opinion at the time was that she had dropped a depth-charge prematurely, but shortly afterwards she reported that she had been mined and was investigating the damage.[4]

The explosion was just abaft the main mast. The sea rose as high as the masthead, but there was no visible explosion. Able Seaman Hoyle of *Blanche* recounted:

I was on deck. A terrific explosion shook the ship. I saw a man blown right past me over the side of the ship into the water. At the same moment, the mast snapped and crashed down. As a lifeboat was lowered to rescue the man, the ship was already listing badly. Our first thought was for the men

trapped below near the explosion. We forced our way through the wreckage to rescue them. The cook in the galley was badly injured and an officer who was having a bath was bleeding badly. There was no panic. The injured men were brought up and laid on the deck while we tended to their injuries. The man who was blown overboard had been safely picked up, though he was hurt by the blast of the explosion.[5]

Being smaller than *Adventure, Blanche* suffered major structural damage. Significant flooding occurred and the engines seized. The crew worked hard shoring up the bulkheads and manning the pumps, but the destroyer sank slowly by the stern. The tug *Fabia* arrived, but after what at first appeared to be a successful attempt to tow the destroyer towards Sheerness, *Blanche* capsized to port, about a mile north of Spit Buoy off Margate, spilling the men over her side and into the water. One rating was killed and twelve others injured. Able Seaman Hoyle continued:

Destroyer *Blanche*, August 1938. She was mined in the Thames Estuary in November 1939. (W&L)

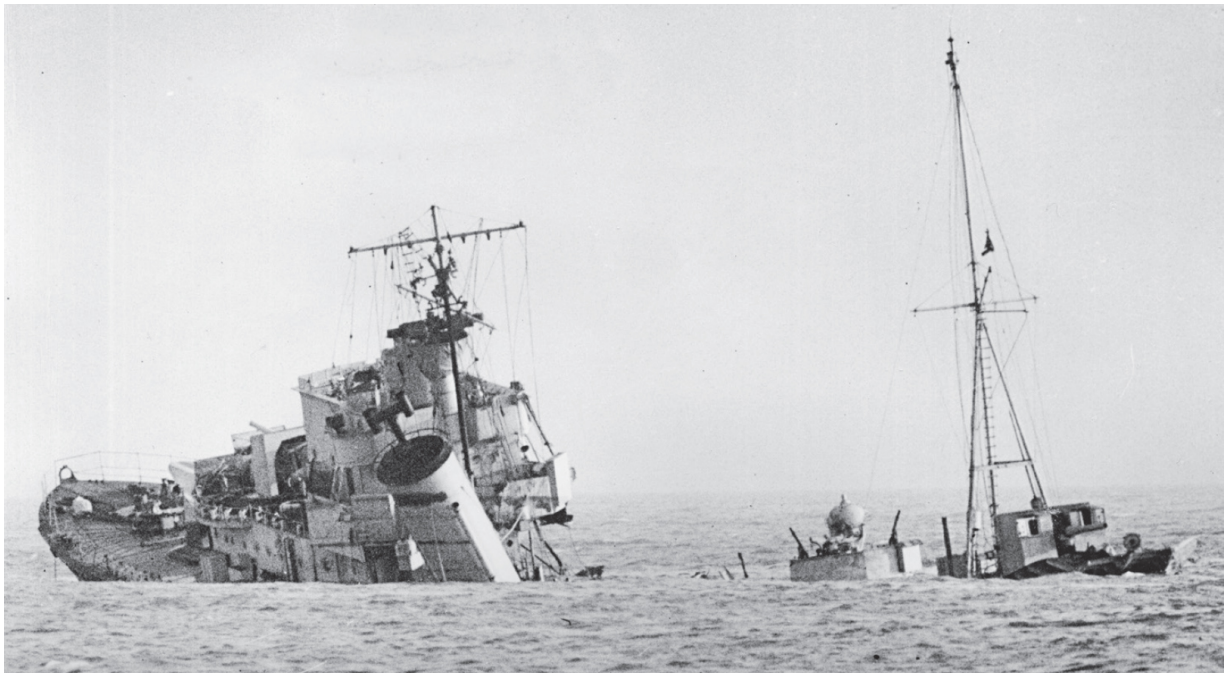
We put lifebelts on the injured and as the ship was sinking, slid them into the water. I saw one man take off his own lifebelt and throw it to one of the injured men as he floated in the water. I also saw the Captain, who had no lifebelt himself, unstrapping one of the injured from the stretchers. There was a lot of oil floating on the surface and this made swimming difficult. A friend of mine, who cannot swim a stroke, held one of the injured men's head above the water. The captain swam around encouraging the men. Gradually the tug picked up most of us and then a trawler and a little pleasure boat came out and picked up the rest.[6]

Adventure made it to shore and anchored at the Nore around midday. She would be out of service until August 1940. An unnecessary delay in halting further ships entering the channel that was obviously mined resulted in the 1,346-ton *Ponzano* and the 8,003-ton *Matra* also going down during the day. Later, a further eleven ships totalling some 35,000 tons would sink due to the mines laid on this foggy November night.[7]

Another minefield laid off Harwich during the night of 17/18 November by *Künne, Arnim* and *Heidkamp* in a sortie led by Fregattenkapitän Hartmann, C-in-C of the 5th *Zerstörer* Division, would also score dramatically. The first ship, the 8,309-ton Dutch liner *Simon Bolivar* ventured into these mines during the 18th. She had just left Holland for the West Indies with 400 passengers and crew on board, including women and children heading away from the war. The explosion was violent and many were killed by the blast, including Captain Voorspuiy. About fifteen minutes later, there was a second explosion and *Bolivar* sank with the loss of eighty-four lives. It appears that she had triggered two mines, one on each side of the ship.

The next day, the 11,931-ton Japanese liner *Terukuni Maru* came through the Dover Straits, heading for the Thames Estuary. At the South Downs, she was inspected for contraband, and had to wait for two days before receiving clearance to proceed, as the area was still being swept for mines after the *Simon Bolivar* incident. Finally, clearance was given and, with a pilot on board, the journey continued on the morning of the 21st. Just after midday, a forceful explosion rocked the liner and the forward holds

were ripped open to the sea. *Terukuni Maru* sank in less than forty-five minutes. Captain Matukura was able to maintain control, however, and there were only slight injuries among the twenty-eight passengers and 177 crew, who all took to the boats.



Destroyer *Gipsy*, mined off Harwich in November 1939. (Associated Press)

The drama was watched from the seafront of Harwich but still, at 21:00, the destroyers *Griffin, Gipsy, Keith, Boadicea* and the Polish *Burza* were ordered to sea for a night-time patrol. Almost predictably, *Gipsy* activated one of the magnetic mines laid by German destroyers three nights earlier. The explosion occurred amidships, breaking the back of the destroyer. The night was lit by searchlights and, as with *Terukuni Maru*, the disaster could be seen from the seafront. Several men managed to swim ashore through strong tidal currents. Tragically, some of these died of exposure after having reached shore, as the barbed-wire defences prevented rescuers from reaching them in time. The 115 that were saved were picked up by small boats, sent from the other destroyers or moving out from the harbour, careful not to trigger further mines. Thirty of *Gipsy*'s crew, including the captain, Lieutenant Commander Nigel Crossley, were killed.[8]

On the same day, in the Firth of Forth, the cruiser *Belfast* set off a mine laid by *U21* (Kapitänleutnant Fritz Frauenheim). Badly damaged, the cruiser was towed back to Rosyth, where it was established that her keel was actually broken. Twenty-one crewmen were wounded; one later died. After temporary repairs, *Belfast* was taken to Devonport, where she was virtually rebuilt and out of commission until November 1942.

On the night of 18/19 November the first mines were laid in the Humber Estuary by *Steinbrinck, Lody* and *Eckholdt* under the command of Fregattenkapitän Erich Bey, C-in-C of the 4th *Zerstörer* Division. This field eventually resulted in the sinking of seven freighters.

The destroyer mine-laying operations continued during January and the first half of February 1940. Ice conditions and extremely poor weather resulted in several operations being delayed or aborted. In the morning of 18 January, *Koellner* and *Zenker* returned to Wilhelmshaven, having turned in the face of a severe storm in the North Sea. They had both incurred sea damage and in all thirty-two mines had been lost during the night. On other nights, though, when conditions were better, several larger operations –

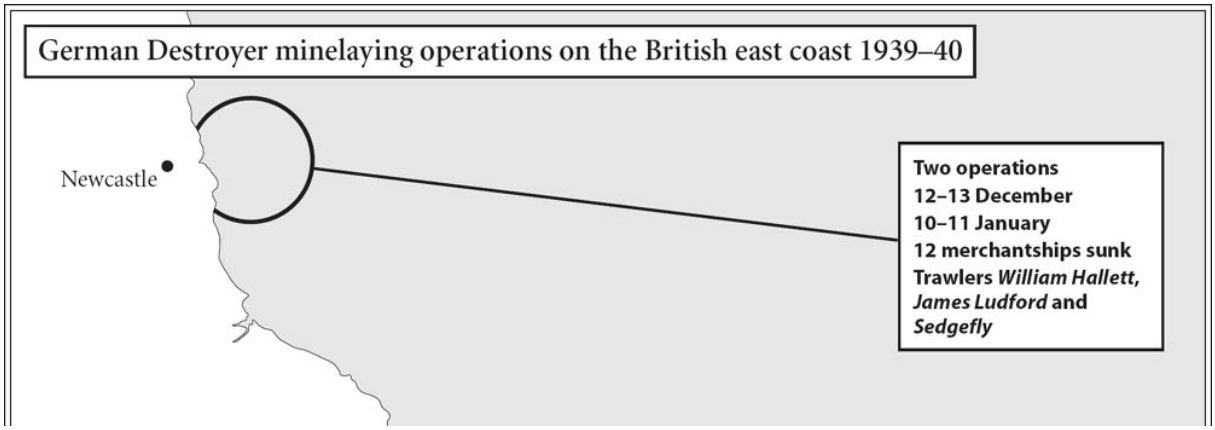
some on two different sites the same night – were carried out. Engine troubles continued to plague the German destroyers and on several occasions a number of the ships had to stay behind or turn back. Quite often only three or four destroyers were operational on the day of the sortie, and mines had to be shifted in haste from one ship to another. In all, seventeen of the twenty-two *Zerstörer* in service at the time participated in one or more mine-laying operations.

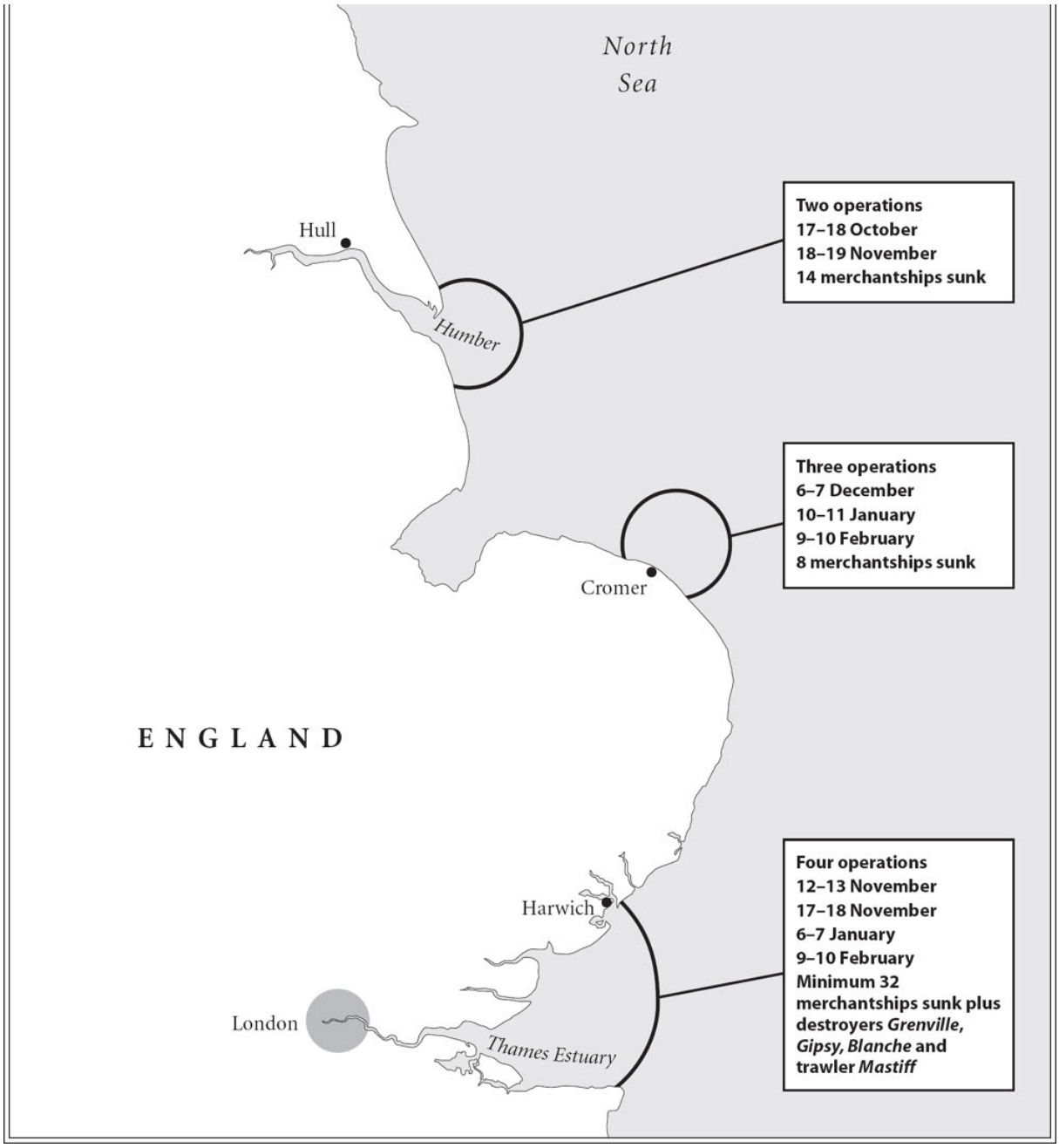
On 19 January 1940, the 1st Destroyer Flotilla was approaching Harwich in calm weather when *Grenville* (Captain George Creasy) struck a mine east of the Kentish Knock Lightvessel. The minefield had been laid by the destroyers *Steinbrinck, Ihn* and *Eckholdt* on the night of 6/7 January. *Grenville* quickly capsized, taking seventy-seven men down with her.[9] Several of the men were trapped in the bow, which was broken off by the explosion, as there was no hatch up to the forecastle from the mess deck and the men could not get out before the bow, which floated vertically, sank.

In all, eleven offensive mine-laying sorties were undertaken from October 1939 to February 1940, between patrol and escort missions: two off Newcastle, two off Humber, three off Cromer and four in the Greater Thames Estuary. The SKL was carefully restricting the missions to dark nights with no moon and limited visibility, but the navigational skills of the German pilots took the *Zerstörer* through the gaps in their own minefields and to the correct positions on the British east coast without mishap. Between 1,800 and 2,000 mines were laid, a large percentage of them magnetic, causing continuous and serious losses to the British coastal forces and disrupting the traffic in the Thames and Humber estuaries and off Newcastle and Cromer Knoll.[10] At least fifty-five merchant vessels, totalling nearly 200,000 tons, plus three destroyers and six trawlers and auxiliaries were lost in the destroyer-laid minefields (see Appendices A, B and H).[11]

The last mine-laying operation was during the night of 9/10 February, when some 250 mines were laid in two fields: 110 mines inshore of the Shipwash Lightvessel off Harwich and 157 mines off the Cromer Knoll Light. These fields were a mixture of contact and magnetic mines and created great problems for the coastal traffic until they could be swept. In all nine ships totalling nearly 40,000 tons were sunk. Shortly after, *Altmark* was intercepted in Norwegian territorial waters and all focus was turned northwards to Denmark and Norway. The Admiralty did not realise for quite some time that the mines had been laid by destroyers.

On 14 December 1939, the 9,141-ton British motor tanker *Inverlane* was on passage from the Middle East for Invergordon with a cargo of oil when she detonated a mine some miles off Tynemouth. The mine was one of several laid during the night of 12/13 December by *Künne, Ihn, Steinbrinck, Beitzen* and *Heinemann*. The explosion left one man dead, three missing and several seriously injured, out of her complement of forty. The weather was bad, with poor visibility, and *Inverlane* was abandoned and left to sink. She did not sink, though, and was found thirty-six hours later some 25 miles away, aground on a sandbank.[12] The DTMI inspected the wreckage and concluded that she had struck a contact mine, probably laid by surface ships during a period of fog a few days before.[13] For some reason, it seems that this conclusion never reached the Admiralty, or if it did, the significance of it was not considered.





Modified from Bekker, *Verdammte See*

Destroyers *Kelly* and *Mohawk* were in the Tyne undergoing minor repairs at the time and took to sea, looking for U-boats responsible for the sinkings. As they approached the area, commencing an Asdic sweep, there were a number of distinct bumps moving along the side of the destroyer before *Kelly*'s stern blew up in a mighty explosion. She started to take water

and go down by the stern. Captain Louis Mountbatten and his men performed sterling damage control, and Commander Eaton in *Mohawk* had lines put across, towing the crippled destroyer back to the Tyne. There, remnants of a horn from a mine were found embedded in the ship's plating, clear evidence that the explosion had come from a contact mine. Contact mines could not be laid by German U-boats in such numbers as were found off the Tyne, but still the obvious conclusion was not drawn – not even when no less than 140 mines were swept in the area over the next few days.[14]

In a meeting organised by the director of Plans Division, Captain Victor Danckwerts, on 20 October, to discuss the increased number of ships hitting mines in nearshore waters, the use of destroyers as minelayers was dismissed as a practical alternative, 'owing to the difficulty of concealing their identity'. The fact that Admiral Lütjens had taken six *Zerstörer* into the British sea lanes, laying nearly 300 mines in the Humber Estuary two nights earlier was completely unknown.

Countermeasures discussed in the same meeting included destroyer night patrols between Yarmouth, Terschelling and the Downs, and between Humber, Dogger Bank and Terschelling, to catch U-boat minelayers on the surface as well as trawlers and merchant minelayers in transit for the British coast. The convoy traffic was halted at night, and outside the areas to be actively patrolled, the UK leads would actually be free for the German destroyers to operate. The meeting recommended giving 'serious consideration' to shutting down or obscuring lights and navigation marks, but most of the lights and lightvessels along the east coast were kept burning for quite some time, assisting the positioning of the German minefields. Apparently the decision to make them burn was taken for 'certain operational reasons' that were not further detailed. Only on 21 November did the Admiralty decide to extinguish the lights in the Thames Estuary, prohibiting night navigation.

The increase in the number of mines in British waters was attributed to U-boats, trawlers, disguised merchantmen, MTBs or aircraft. How the limited number of available U-boats could have been capable of laying such large minefields covering huge areas seems not to have been questioned, far less the fact that they could not physically lay a large portion of the contact mines that were swept. In an appreciation of *Salmon*'s attack on the cruisers *Leipzig* and *Nürnberg*, on 27 December, Admiral Forbes correctly assumed that they were part of a covering force for 'a minelaying expedition returning from having laid mines off the Tyne and perhaps some other locality', but his thoughts seem not to have been pursued.[15]

In the beginning of March 1940, the converted merchant ship *Schiff 11*, disguised as a neutral Estonian with a deckload of timber, laid a large field of moored contact mines and sweep obstructers off North Foreland. The gap between the Dover Barrage and the East Coast Barrage through which *Schiff 11* passed was also the division line between the Nore and Dover Commands, and the respective destroyers and A/S trawlers on patrol avoided this area in order not to run into each other, which would create a potentially dangerous situation. German naval intelligence knew this and the skipper of *Schiff 11* navigated by dead reckoning and echo-soundings into the area to lay the mines. Seven ships were sunk by these mines and two damaged.[16] This was the last offensive German minefield laid on the British east coast prior to the fall of France.

Encounters

Most of the time, the sorties were uneventful, but on the fifth operation, in the early hours of 7 December, *Giese* and *Lody* under the command of Fregattenkapitän Bey, C-in-C of the 4th Division, ran into trouble. *Arnim* had also left the Schilling Roads the day before to be part of the operation, but had to turn back before passing the Westwall barrier due to boiler problems and the loss of one of the electrical engines.

Just after they had laid the mines off Cromer, *Giese* sighted darkened shadows some 5 miles west of the Cromer Knoll Lightvessel. The mine-laying group had come across the British destroyers *Juno* and *Jersey* of the Outer Dowsing patrol. The weather was fine with light winds. In spite of the beginning of moonrise in the east, it was very dark. Undetected by the British destroyers, the Germans fired torpedoes from a distance of 5,800 yards.

On board the British destroyers, nothing was detected until, at 02:30, a strange sound was heard by the hydrophone operators, later recognised to be the surfacing and running of a torpedo on the surface. A few seconds later the torpedo was seen less than 160 yards from the side of *Jersey*. The wheel was put hard to port, but, even before it had begun to take effect, the torpedo struck on the port side, abreast the after torpedo tubes. The explosion was relatively light, but a flame, around 100 feet high hung in the air for a while and, when it subsided, a fierce oil fire was seen from the bridge to be burning aft. The engines were running, but the rudder was jammed to port, and the destroyer turned, bringing the wind on the starboard beam, blowing away the flames and smoke coming out of the hole in the port side. The engine room reported rapid loss of water and steam and at 02:35, with the wind fully on the starboard beam, the engines were stopped. A signal was made to *Juno* that her consort had been hit by a torpedo but neither Lieutenant Commander Alec McKillop of *Jersey* nor Commander William Wilson of *Juno* had any other thought than that the torpedo had come from a U-boat. Commander Wilson's attention had been drawn by one of the lookouts to a darkened ship in the swept channel and possibly another one behind. Before he had time to think much about it, though, the torpedo exploding onboard *Jersey* took all his attention. When, shortly after, a signal from *Jersey* said 'Definitely torpedo', followed mistakenly by 'Fired from close range from eastward', Wilson did not draw

the right conclusions. There is little doubt that the shadows seen were *Giese* and *Lody*.

It quickly became clear that *Jersey* was not sinking, and steam escaping from the fractured 4-inch pipe to the paravane winches actually helped douse the fires. McKillop ordered all men not directly involved in damage control aft to abandon their stations and move forward, while those assigned to the aft fire stations donned lifebelts or protective clothing as appropriate and commenced securing their ship. One boiler was found to be operational, but as all the steam produced from this had to be used to eject water from the bilges, keeping the engine rooms from flooding, the engines were for all practical purposes unusable. The aft magazine was not flooded, although Stoker Kentfield was standing by to do so at considerable risk to his life. As soon as the quarterdeck was accessible, volunteers went aft, securing the depth-charges, whereafter they were unceremoniously dumped overboard.[17]

Meanwhile, as assistance was not imminently needed, *Juno* went hunting for the presumed U-boat, circling her consort and dropping depth-charges at possible contacts. In spite of the tactical advantage, Bey did not pursue the attack and turned for home. By the time Commander Wilson went looking for a submarine, the destroyers were gone.[18]

Nothing was found, of course, and at 05:00 *Juno* was called back to take *Jersey* in tow. The operation was uneventful, and at 20:00 the tow was handed over to tugs at Immingham docks. Two officers and eight ratings were lost on board *Jersey*. Realising that the destroyers had not been detected at all, German propaganda upheld the mistaken identity through accounts of a daring U-boat attack on the front-page of the newspapers a few days later.[19]

Operation Wikinger

On 22 February 1940, an event occurred that was to sour badly the already-poor relationship between the Kriegsmarine and the Luftwaffe. Göring's absolute refusal to set any aircraft under naval command meant that any attempt at coordination would have to follow long chains of command between units of the two branches. On this day, the system would go terribly wrong.

Zerstörer Z1 Leberecht Maass. (Author's collection)

In the first weeks of 1940, a number of fishing boats and trawlers had been observed on Dogger Bank west of, but close to, the Westwall minefield. They looked to be fishing, but the SKL thought they might not be quite as innocent as they appeared. Perhaps they were trying to look for the entrances to the safe passages through the declared area; perhaps they were trying to sight and report submarines and destroyers coming through on missions into the North Sea. In the afternoon of 22 February, six destroyers under Fregattenkapitän Fritz Berger, C-in-C of the newly re-formed 1st *Zerstörer* Flotilla, left Willhelmshaven to find out – Operation Wikinger.[20] The six destroyers taking part were a mixture of ships from 1st, 2nd and 4th Flotilla: *Z16 Friedrich Eckholdt, Z4 Richard Beitzen, Z13 Erich Koellner, Z6 Theodor Riedel, Z3 Max Schulz* and *Z1 Leberecht Maass*. Berger was in his usual flagship *Eckholdt*, and all destroyers had additional prize crews on board.

Unlike the start of the familiar mining operations, this night was moonlit and clear with calm seas. As the ships had no radar, lookouts were needed to find the fishing vessels, and the sea needed to be suitable for boarding. Luftwaffe fighter escort had been requested but none showed up.

Entering the so-called Weg I, an open channel in the Westwall, around 19:00, Berger set the speed at 25 knots and ordered the ships in line-astern formation, course 300º (WNW). He wanted to get through the field as quickly as possible to start searching for the trawlers while the ideal conditions lasted.

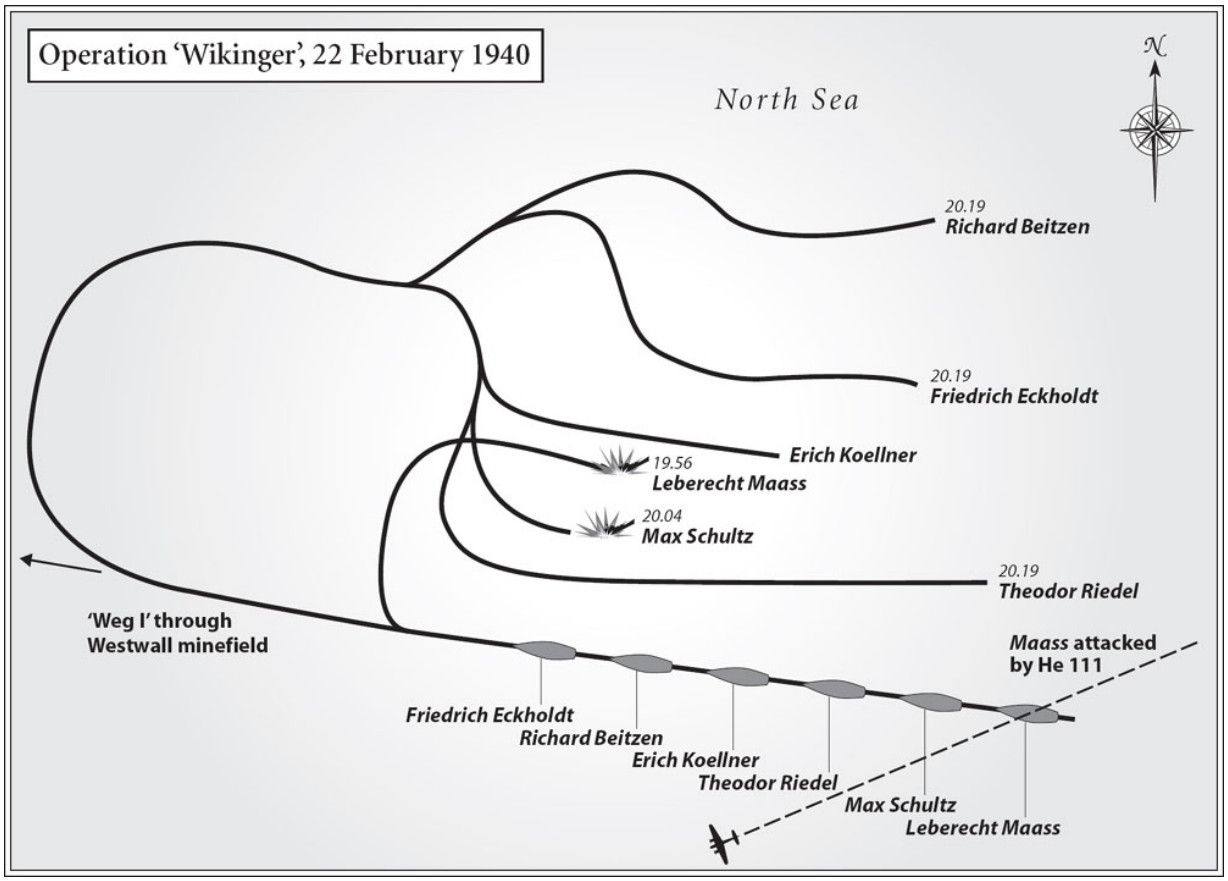
Well into the Westwall, a single aircraft was heard coming up from behind, overtaking the ships at a height of around 1,600 feet. The aircraft was seen clearly when close enough, but not identified. Making a significant wake at the set speed, everybody on board the *Zerstörer* took it for granted that they had been observed too. There were no recognition signals from either ship or aircraft. Having passed *Eckholdt* in the lead, the aircraft turned, flying down the line before disappearing.

Eight minutes later, the aircraft was sighted again, and Berger ordered speed to be reduced to 17 knots to reduce the wakes and become less visible. Still not able to identify the aircraft, *Beitzen* and *Koellner* briefly opened fire with their 20-mm A/A guns. The fire was returned from the aircraft, which quickly turned away. Korvettenkapitän Claus Trampedach reported from *Schulz* that his men had seen black crosses on the wings of the aircraft in the light from its machine guns. This was met with some scepticism from Berger, and the crews on board all destroyers remained alert.

At 19:40, the aircraft appeared for the third time, approaching the tail-end destroyer, *Leberecht Maass*, from the rear. Two hours earlier, at around 17:45, a number of He111 bombers of II/KG26 had taken off from Neumünster airfield north of Hamburg, heading for the British east coast to attack coastal shipping. Feldwebel Jäger, flying one of the bombers, steered north-west until he passed over Sylt, where he turned west-south-west into the North Sea. Shortly after 19:00, the bomber crew detected a wake on the sea below them, and the shadow of a ship making it. The ship was not identified and another low-level pass was made. This time they were fired on, and what now looked like an alien ship, whether a merchantman or man-of-war, was clearly a target. What the ship was doing inside the declared area was apparently not considered.

Four bombs were dropped from the Heinkel. Two missed just aft of *Maass*, one hit between the bridge and the forward funnel, and one missed ahead. The destroyer veered to starboard, rapidly losing speed. Panic and disorientation ensued as several explosions followed, and sightings of submarines and torpedo tracks were reported. All destroyers opened fire though it is unclear what they were firing at. Korvettenkapitän Bassenge from *Maass* reported to the flagship: '*Habe Treffer. Brauche Hilfe*' – 'Have been hit. Need assistance'. No fire appeared, and the night remained dark after the explosion, so when the other destroyers reversed course to assist,

Berger at first ordered them back into formation. At 19:46, though, he turned back to find out what had happened. As they approached the shadow of their stricken companion, a mighty explosion occurred amidships on *Maass*, which vanished in a pillar of smoke. When the smoke lifted, the destroyer had broken in two, with the bow and stern still visible like a gigantic V. *Koellner* closed the wreck to start rescuing the survivors, reporting over radio: '*An alle. Maass sinkt. Boote aussetzen*' – 'To all. *Maass* going down. Send boats'.



Adapted from Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945*

On board the He111, Feldwebel Jäger and his men saw the ship they had attacked losing speed and turning away. There were no fires or other damage to be seen in the darkness and a second attack was decided on. Thirteen minutes after the first attack, at 19:58, a further four bombs were

dropped, two of which were seen to hit, causing a huge explosion. Content, Jäger headed off.[21]

At 20:04, *Koellner* had stopped close to the wreck, pulling survivors out of the cold water. The other *Zerstörer* were approaching to launch their boats in assistance, when another huge explosion occurred some distance to the south. Again chaos and confusion ensued. *Beitzen* reported an air attack; *Riedel* reported picking up a submarine contact which was attacked with depth-charges. Five minutes later, *Koellner* also reported submarine echoes and Berger ordered all rescue attempts to be terminated while they focused on finding and eliminating the submarine that was apparently in the area. *Koellner, Beitzen* and *Riedel* acknowledged the orders from the flagship, but nothing was heard from *Schultz*. After a chaotic half-hour, during which several submarine sightings were reported, Berger finally regained control and reorganised his ships, only to confirm that *Max Schultz* had been lost with all hands.[22] At 20:36, Berger decided it was time to get out without further losses and ordered 'An *alle. Kurs 120 Grad. Fahrt 17 sm*' – 'Course 120. Speed 17 knots'. They were going home; the trawlers would not be disturbed this night.

At first it was believed that British aircraft and submarines had operated in concert, but as the inquiry proceeded it became horribly clear that the aircraft sinking *Maass* had been an He111. The loss of *Schultz* was also blamed on the aircraft, but she most likely strayed into mines laid by the British in the open channel; Weg I had not been swept for several weeks.[23]

The He111 had been on a pre-warned sortie. X Fliegerkorps had informed Naval Group West that KG26 would fly against shipping on the British east coast that night, but this information had not been forwarded to the *Zerstörer*. Worse, the Kriegsmarine had not warned the Luftwaffe properly of the destroyer sortie and the pilots of KG26 did not know there were friendly ships around. The request for fighter escort sent to

Jagdfliegerführer Deutsche Bucht (Fighter Command German Bight) had neither been acted upon nor forwarded to KG26.[24]

German sailors had been killed by 'friendly fire' due to the almost total absence of communication between the Luftwaffe and the Kriegsmarine. Instead of being used as an inspiration for more efficient communication between the two services, however, the episode created bitterness, widening the gap between them and leading to further serious episodes later. Nobody was held responsible for the incident, either in the Luftwaffe, or in the navy.[25]

The next day, after nightfall on 23 February, the German minesweeper *M1* under the command of Kapitänleutnant Hans Bartels ran into four Danish fishing vessels near Dogger Bank, inside the declared area. Due to rain and fog, the Danish fishermen were at anchor and held contact via radio Morse signals. Bartels, coming up Weg I, one of the clear routes through the Westwall, was informed by his radio operator that the Danes were communicating and, not able to understand their signalling, took it for granted that it was coded information regarding the minefield and *M1*'s route through it. He further assumed that they had some connection to the catastrophe the night before and without further investigations decided to sink the cutters. In order not to alert the other boats, Bartels decided to ram the Danes, which had their navigation lights as well as supplementary lanterns on due to the fog, rather than use gunfire. In all, four cutters, *Ejjam, Gerlis, Merkator* and *Polaris* were rammed and sunk. Each had four men on board and no effort was instigated to try to assist any of them, should they have survived the impact.

M1 returned to Heligoland, while other Danish fishing vessels during the next days recovered wreckage and two bodies from *Ejjam*. Befehlshaber der Sicherung der Nordsee, Vizeadmiral von Schrader, fully endorsed Bartels's actions, adding that it was very plausible that the Danish fishing vessels were in British service.[26]

— 20 —
The Northern Patrol

Armed Merchant Cruisers

BASED ON THE POSITIVE experience with AMCs in WWI, the British Admiralty in late 1919 discussed the possibility of modifying or 'stiffening' a number of suitable merchant and passenger ships during construction, so that in the event of a new war, these ships could, without further modifications, mount guns and serve as auxiliaries. It was realised by the Admiralty that the AMCs were not warships and in general unsuited for their allocated tasks, with weak armament and lack of speed and protection. Nevertheless, the use of AMCs seemed to be the best, if not only, solution to the restrictions imposed by a hard-pressed civilian government.

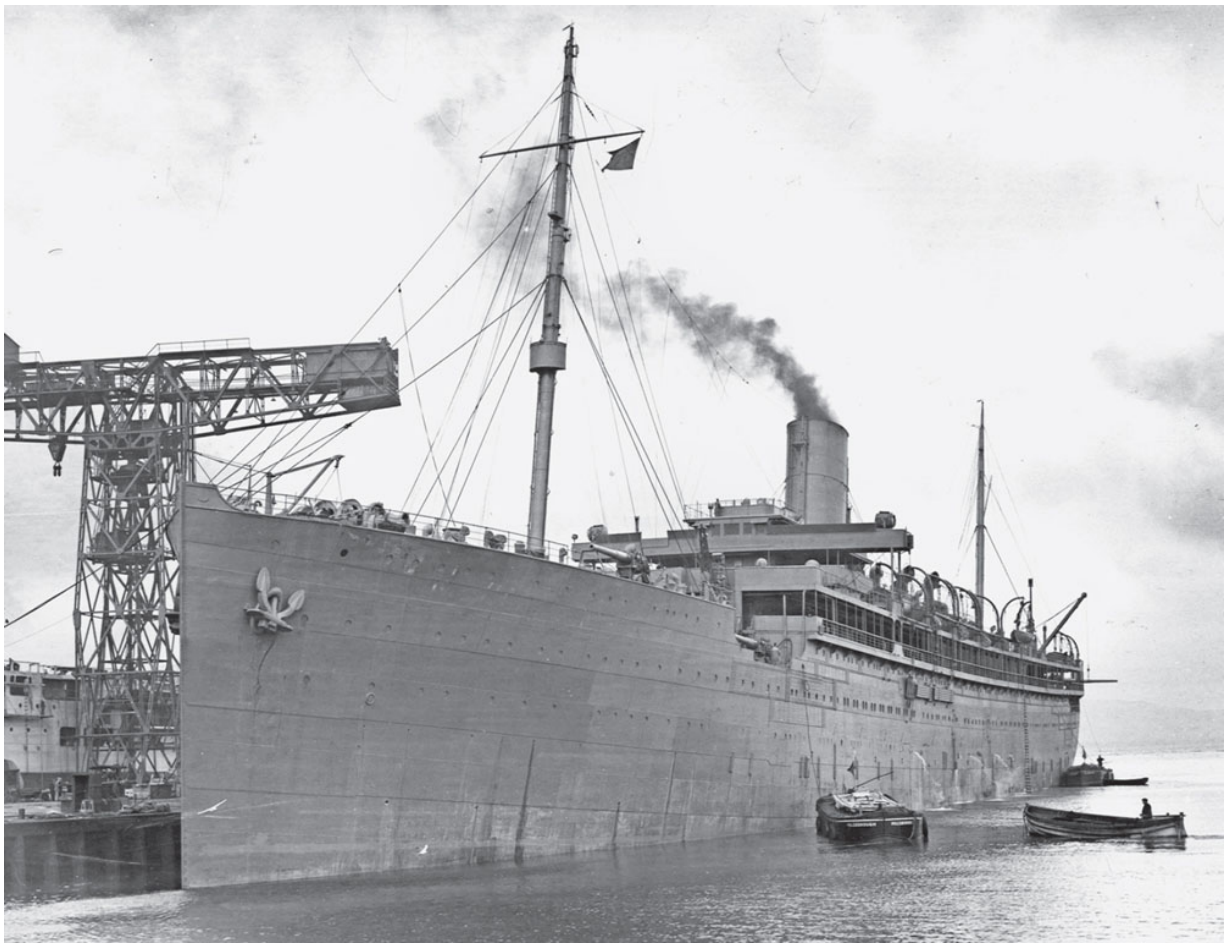
Discussions were initiated with shipowners and liner companies to decide on the most efficient measure, while minimising the disturbance and cost. Agreement was eventually reached and the Treasury reluctantly approved the cost of the additional work. The stiffening was either to be fitted permanently or, if likely to interfere with the operations of the vessel, made portable and carried on board. The equipment installed included steel package rings, on which the gun pedestals were to be mounted, transverse plating between decks, longitudinal brackets and portable 6-inch pillars to shore up the decks under the gun mountings.

Experience had shown that too-large vessels were impractical due to fuel consumption and limited manoeuvrability, and the Admiralty preferred twin-screw ships, capable of 15 knots or more with a range of at least 4,500 miles, and large enough to mount at least four 6-inch guns not less than 14

feet above the waterline on each side. In most cases, the ships selected were cargo or passenger liners between 8,000 and 20,000 tons. Fifty ships were to be prepared and available at any one time, the guns and mountings being stored in various dockyards around Britain and the empire.

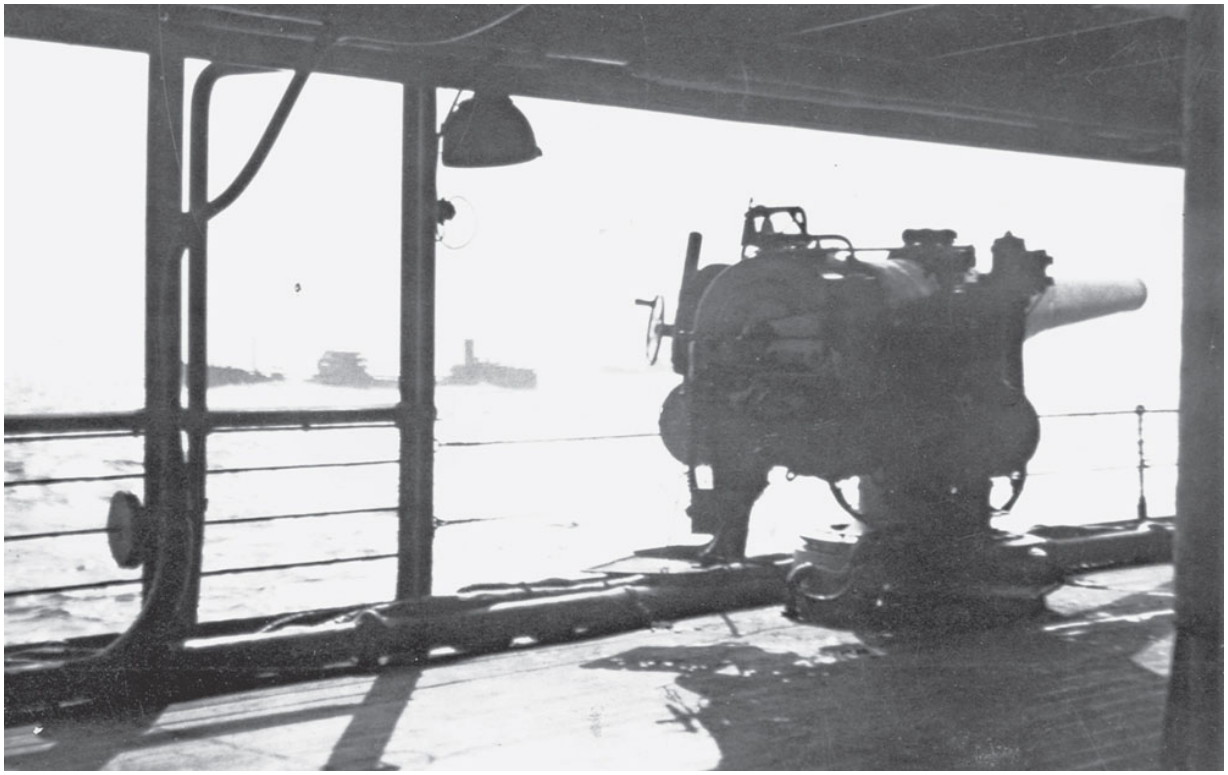
By 1937, a number of the earliest designated vessels were nearing the fifteen-year age limit considered practical for AMCs and, in 1940, thirty-two of the ships would be above that age limit. Also, few new British-owned ships with the appropriate specifications were being built at that time, resulting in a lowering of the criteria for selection. By March 1939, it was recognised that the number of AMCs needed in a war would be up to seventy-four, rather than fifty. Manning even fifty would be a severe challenge, though, and virtually impossible without the transfer of experienced men from the regular service; all the more so as it was considered desirable to have most of the ships in commission no later than four months after the outbreak of war. In the event there would be no more than fifty AMCs in commission.[1]

In mid-August 1939, the Admiralty decided to commence the requisitioning of the AMCs, preparing them for use on the Northern Patrol or as ocean convoy escort. A minimum of twenty-five vessels were considered necessary for the Northern Patrol, while sixteen to nineteen were needed for the main ocean convoy routes. To speed up their entry into service, it was decided to give the first batch ‘emergency’ equipment only, during a three-week period, and then fit the next batch with ‘semi-complete’ equipment, before initiating the complete conversions. The ships of the early batches would be fully converted at a later opportunity, as soon as the number of operational AMCs had become satisfactory.[2]



Mooltan, one of the AMCs of the Northern Patrol after the completion of her conversion in October 1939. (P&O via Richard Osborne)

In all, nineteen ships were given the initial ‘emergency’ transformation during August and September 1939: thirteen in the UK and two each in Gibraltar, South Africa and Canada.[3] These were equipped with old, unshielded 6-inch guns, basic rangefinders and directors, and given temporary wooden magazines and shell rooms. As much of the furniture, bulkheads and unnecessary equipment as possible was landed to reduce the risk of spreading fires. To increase stability of the ships, rock or rod metal was added as ballast, in some cases sand or pig iron. Added buoyancy was provided through the stowage of sealed, empty oil-drums or timber in the holds and between decks. Sandbags and simple steel plates acted as protection for the bridge area, steering gear and engine rooms. At first, the crew was accommodated in the relative luxury of the passenger quarters, while later messes were fitted for the ratings and petty officers. The officers had among the best accommodation of the entire Royal Navy. By 13 January 1940, forty-nine AMCs were in commission or at least ready from the yards, working up.[4] Of these, twelve were fitted with emergency equipment and thirty-seven with semi-complete. Eighteen were allocated to the Northern Patrol, ten to the Sierra Leone Escort Force, four to Halifax Escort Force, and the rest to various stations around the world.[5]



Mooltan was equipped with eight 6-inch guns, all of them unshielded like this one. (P&O via Richard Osborne)

Armament of the early AMCs consisted in most cases of six to eight 6-inch guns, a pair of 3-inch HA guns, some Lewis 0.303-inch machine guns, and a rather basic director system. If at all possible, the guns were sited so as to give a ‘broadside’ of at least four and a chase fire of two guns. Limited elevation of the guns and poor mountings gave an effective range of no more than around 12,000 yards, inferior to most comparable German raiders. Hitting anything at this range, though, was rather serendipitous, due to the primitive fire-control systems. Initially, the guns were unshielded, which made life for the gunners rather miserable under most conditions and very exposed in action. Shields were retrofitted in most AMCs, but were given low priority as that required considerable yard-time.[6] The armament of the AMCs was complemented by up to fifteen depth-charges with roll-off racks aft. Later, the number of charges was increased and some ships had throwers mounted, but as none of the AMCs was equipped with Asdic, the use of the charges was at best ineffective and rarely considered at all. Likewise, chemical smoke-making apparatuses installed aft proved ineffective in anything but ideal conditions.[7]

When manning the AMCs, as much of the original crew as possible was drafted and kept on board, in particular officers and petty officers, engine room and catering staff. The pre-war master was in most cases made navigation officer. The rest of the complement was made up by merchant navy men brought under naval authority for ‘hostilities only’ by a special charter issued by the Admiralty. The new captains and senior officers of the AMCs were mostly retired RN, recalled for war service; some of the younger officers were RNR or RNVR. A few key positions, mainly weapons specialists, were regular RN ratings or NCOs.[8]

Scotstoun's foredeck in the Denmark Strait in November 1939. (T Grover via Richard Osborne)

The AMCs filled critical gaps in the front-line service of the Royal Navy at the start of the war. Above all, they were used on the Northern Patrol and as convoy escorts in the Atlantic. Some also saw service in the South Atlantic, the Indian Ocean and on the American and West Indian stations. As convoy escort, the AMCs had only limited capabilities due to their inadequate armament and manoeuvrability, but nevertheless did a vital job keeping the convoy together and handling communication for the commodore.

Gale Force During the Night

As soon as war was declared, the Admiralty established a series of contraband control bases. In Britain, these were at Weymouth, the Downs (later moved to Falmouth) and Kirkwall. Further afield, Gibraltar, Malta, Haifa and Aden were also used. In these places, all shipping bound for Germany or to neutral ports with access to German territory should call to verify they were not carrying contraband and receive papers that should take them through later offshore controls. Shipping companies were encouraged to submit advance copies of cargo manifests and ships' papers to the port they expected to use in order to expedite the inspection.

Chitral in October 1939 after the installation of emergency equipment. Note unshielded 6-inch guns. (P&O via Richard Osborne)

The Admiralty's intention was that neutral shipping would only be subject to detailed control if they were carrying contraband cargo intended for Germany. The list of contraband, issued by the Cabinet on 4 September, was so comprehensive, though, that it covered 'practically everything of any value to the enemy in wartime'.[9] Furthermore, it was immediately obvious that few neutral ships, far less German ships, would willingly go to a British port for inspection, whether they carried contraband or not. By March 1940, very strict routines had been established where only neutral ships in ballast which had undergone control by Britsh consuls or shipping officers in the port of sailing, would be issued a pass to exempt them from British inspection. All other ships were liable to interception by the Royal Navy and could be sent to British ports if necessary.[10]

In the south, the controls were made easy by the mining of the Channel and the need for ships wishing to go through to follow the safe routes. In the north, the 200-mile Bergen–Shetland Narrows would have been the logical line of control for the entry to the North Sea. Here, however, neutral Norway's territorial waters offered an opening that German or neutral ships could use to avoid inspection. Instead, the Northern Patrol was established by the Home Fleet across the exits to the Atlantic between Scotland, Iceland and Greenland.

On 18 September, Vice Admiral Max Horton was appointed C-in-C Northern Patrol, with his HQ at Kirkwall while the ships were based at Scapa Flow. Initially, he had the ancient 6-inch cruisers of the 7th, 11th and 12th Squadrons at his disposal (see Appendix L). The seaworthiness and endurance of these ships were insufficient for a sustainable deployment in the north though, and they were little more than a stop-gap measure until AMCs were available to take over. At times, if the weather forecast was too severe or if there were gaps in the line, the cruisers of Vice Admiral Cunningham's 1st Cruiser Squadron and Vice Admiral Layton's 18th

Cruiser Squadron had to fill in. At other times, destroyers were also deployed on the Northern Patrol.

After some trials, a wide-meshed but regular net of patrols was established, usually two ships between Pentland Firth and the Faeroes and three between the Faeroes and Iceland at any one time. This left the Denmark Strait between Iceland and Greenland unattended, except when one or two of the modern cruisers could be spared. Cruiser and destroyer patrols were also set up between Shetland and the Faeroes and between Scotland and the Norwegian coast, supplemented by Coastal Command aircraft patrols. Trawlers were deployed in the Fair Isle Channel between the Orkneys and Shetland and north of the Minches to control the traffic there. As sufficient AMCs completed their work-up, the E-class cruisers were replaced first, then the Ds and lastly the Cs. Eventually, five patrol lines were set up in the Denmark Strait, but these were not always possible to maintain, partly due to lack of adequate ships, partly due to the weather.[11]

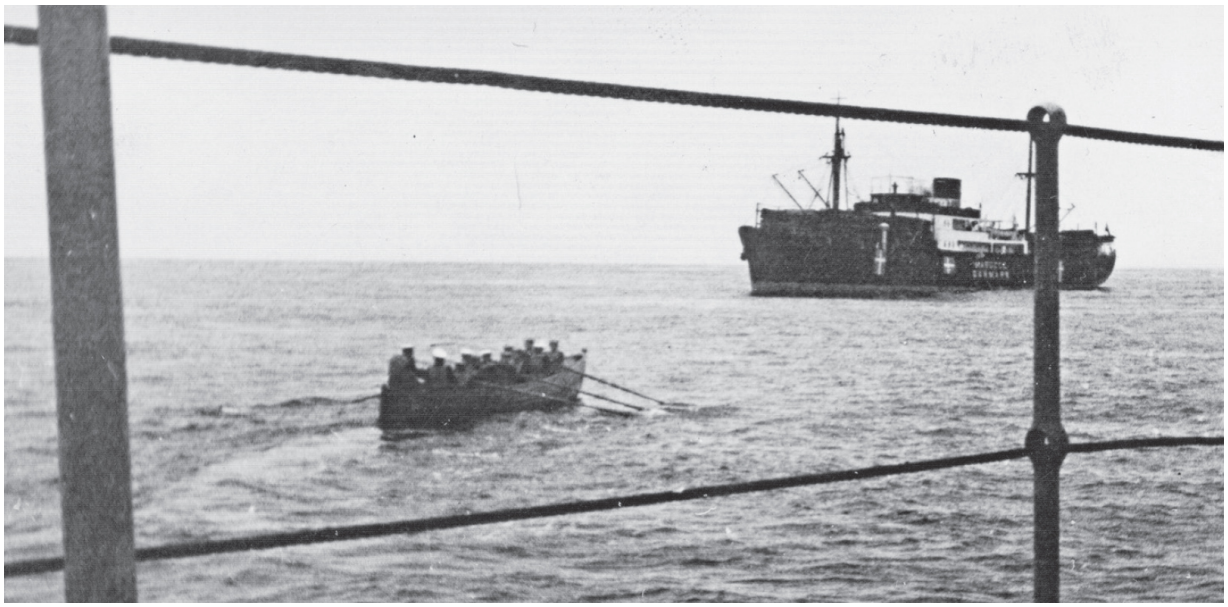
Very few of the ships had radar, and interception relied on keen eyes and binoculars. All ships steamed eastward during the hours of darkness in order not to interfere with each other and to broaden the width of the barrier for German ships trying to break through, which would usually be on a north-easterly course.

On board the ships on patrol, everything was damp. Hatches and ventilators leaked; deck plates and joints dripped icy water. There was no heating in the mess decks and a serious lack of warm clothing for those on the upper decks. Every piece of oilskin available was used as well as flash gear, towels and multiple layers of underwear. Eating was difficult and sleeping likewise. Everything had to be secured to avoid it being thrown about. Moving on deck was dangerous and, in spite of rigged lifelines, men regularly vanished without a trace or at best ended up with broken limbs or bruises from being thrown into something unyielding. The ‘hostilities only’

complement thought they had arrived in Hell and even hardened old salts got seasick. Sleep turned out to be an issue on the ships of the Northern Patrol – or rather, lack of it. Action stations at dusk and dawn and alarms, false or real, interrupted any regularity of rest; it was made difficult in any case by the extreme weather. The time at sea became a constant struggle against fatigue, cold and sogginess, some days becoming a blur of constant action stations. Phil Durham, a young midshipman and spotting officer in the main director on board the cruiser *Norfolk*, who had recently called home from the Mediterranean, was not happy:

> Conditions in County-class cruisers designed for the tropics, better fitted with fans than electric fires, were unpleasant. […] In rough weather a hammock slung in a passage way and swinging to and fro like a pendulum offered stability and relief from the bucketing of the ship denied those who slept in bunks. […] Apart from watch keeping, four hours on eight hours off, action stations closed up daily at dawn and […] not infrequent alarms and excursions; the rest of our time was free. During the dog watches some of us would gather in a cabin and listen to classical music on a radio gram, read plays and debate, important mental stimulation and relaxation in a time of war. […] The temperature continued to drop till, when at last the edge of the pack-ice came in sight, it steadied at about twenty-two degrees of frost, with the extra chill effect of high winds lowering it so much that spray thrown up by the bow was beginning to freeze by the time it reached the lookout position seventy feet above water level, stinging the face before pattering on deck. Gradually, parts of the deck became coated by up to three feet in ice and snow, while the rigging wires formed cores to a foot diameter of ice; the extra top weight of all this ice increased the rolling of the ship, and County-class cruisers with twenty feet of freeboard were never backward rolling performers at the best of times.[12]

The conditions on board the C- and D-class cruisers in the heavy seas were even worse. Boats and Carley floats were swept away, as were depth-charges, shells and just about anything that was not nailed to the deck. Leaks developed in hatches and ventilators and, in some, even the decks started to leak. Many had to sleep with oilskins spread over their hammocks. Destroyers sent to supplement the cruisers also fared ill in the constant high seas. Stoker John Gritten on board *Afridi* wrote:



A boarding party from the cruiser *Calcutta* heading for a Danish merchantman to check for contraband. The sea is unusually calm. (E Skjold collection)

Afridi rolled, pitched, crashed and shuddered. I kept my boiler-room watch-keeping because in the Navy seasickness is a non-sickness: it doesn't exist; one goes on 'working'. I gave up attempting to eat, retched only bile and grew progressively weaker. […] In rough weather the hammock was Jack's only consolation (apart from the daily tot), the only place which remained comparatively stationary while the world swung around it. […] Because of the limited space between decks, hammocks had to be slung at a height where the louvres in the ventilation trunk were about six inches from our faces. When they were open in northern waters, out came an icy blast. The alternative, to keep them closed, usually the one chosen in these latitudes, produced a fug that was scissile when over twenty men were sleeping, exhaling and farting in this confined space. [Being a stoker, I had the] good fortune in being in three watches. We worked for four hours, having eight hours off-duty (providing we were not closed-up at action stations) and 'splitting the dogs', doing a two-hour stint during the dog watches, 16:00–20:00. This meant that even in the roughest weather the stokers were able to keep some semblance of cleanliness and order on their mess-deck. The wretched seamen, on the other hand, had to work in two watches, four on, four off, and in such exposed conditions they were often exhausted when they came off watch. Few even bothered to sling their hammocks; they just lay down in their oilskins in the gangways or flats or on their mess-deck which, in consequence never got a scrub-out until the ship returned to harbour. It became a dog's dinner of leftovers, vomit, dropped off oilskins and broken crockery.[13]

In such conditions, encountered often enough during the winter of 1939/40, heeling over up to 30 degrees was not uncommon for the smaller ships, while yawing regularly over 90 degrees off course. From December 1939, destroyers were no longer deployed on the Northern Patrol, except in emergencies.[14]

The first of the AMCs arrived at Scapa Flow on 29 September to commence workup. This took longer than expected, partly as the atrocious weather prevented exercises, partly as the arrival of stores and equipment was delayed. Eventually, *Rawalpindi, Scotstoun* and *Transylvania* were the first to complete their work-up in early October. Then *Royal Oak* was sunk and all AMCs were promptly sent to sea. The three that had completed their work-up were sent into the Denmark Strait. The others, short of almost every provision, including warm clothing, were given positions closer to home. When *Iron Duke* was damaged by air attacks a few days later, it was clear that the defences of Scapa Flow needed upgrading and the cruisers

were sent to Sullom Voe while the AMCs were sent to the Clyde between patrols, and to work-up as they arrived from the yards.[15] When the AMCs were deployed, it was found that their exposed, unshielded guns iced up, becoming completely useless. Captain Smyth of *Scotstoun* recorded:

8th November: Wind ENE, rising to gale force during the night. Sea Rough. Visibility good, 10 miles. Temperature 26º F [-3.3º C]. Boarding not feasible. The four foremost guns being entirely unprotected become a mass of frozen spray and unworkable if left uncovered. The guns are kept covered with canvas and only the after guns are manned for Cruising Stations when on a course with a head wind or sea. At Action Stations (Daybreak and Dusk), the foremost guns are manned and lined up. Whether they [are useful for combat] in the conditions met with at present in Denmark Strait is problematical. […]

14th November: Gale all night from NE. Temperature 16º F [-9º C]. Foremost guns a mass of frozen spray. It must be accepted that under present weather conditions the foremost guns (4) are from a practical point of view (both material and personnel) out of action. Watchkeeping conditions on the open upper bridge and central position and for lookouts on the unprotected bridge ends are deplorable. It is not seen how this can be improved without permanent weather protection being made.[16]

In foul weather, boarding the intercepted ships was a found to be a very risky business. Phil Durham related:

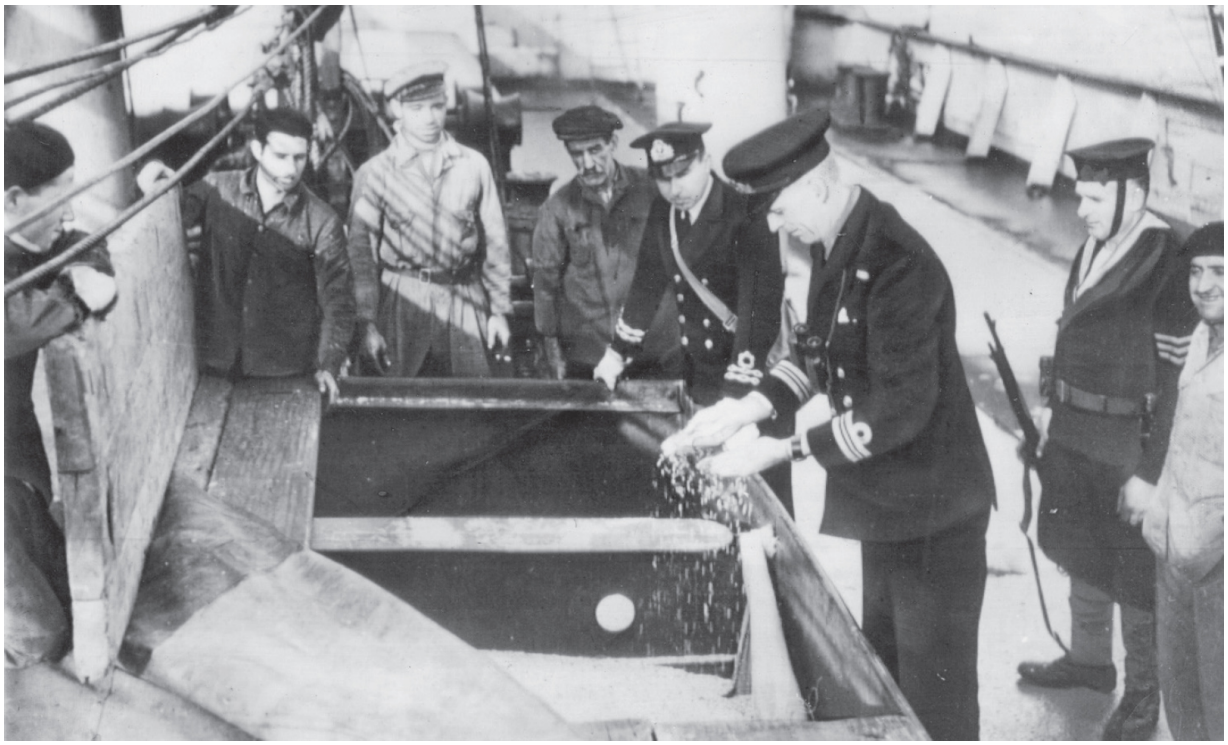
The art of launching a sea boat is to lower her to just above the crest of a wave and let go as the next crest arrives. This time the coxswain misjudged and slipped the one-ton boat with its full crew of fourteen and an additional boarding patrol of ten into a trough. With an almighty splash, the boat dropped six feet and filled with ice-cold water, leaving the crew to pull clear of the ship's side as the rest of us baled for dear life, forgetting our bone-shaken bruises. As the cutter pulled away, sight was lost both of *Norfolk* and the merchant ship in the trough of each wave. It seemed an age before the boat's exhausted crew reached the calmer water in the lee of the cargo ship.

Up a Jacob's ladder dropped over her side scrambled and climbed the boarding party leaving the crew to bale the rest of the water from the cutter. The boarding officer and I, revolvers loaded and ready, led the party and were escorted by the Swedish captain to his most luxurious cabin. Travelling to Kirkwall in this comfort would be a vast improvement on life in *Norfolk*. It was not to be. The Captain produced papers, including a certificate from the British consul in Baltimore, confirming that SS *Karlholm* of Kalundborg had an approved and inspected cargo. It was back to the cutter for a pitching pull back to *Norfolk* with members of our boarding party relieving on the oars some of the exhausted boat crew, one of whom had fainted.

Hooking on to a heavy swinging wooden block when rising and falling several feet is not easy and, once the boat was attached each end, the sudden jerk of the heavy laden boat carried away the

fore guy of the davits. Once more the cutter was slipped to heave and thump against the cruiser's side till a jury replacement guy had been fitted to the davits. Trying to hook on once more, the bowman lost the top of three fingers in the forward block. At last all was secure and we were hoisted clear of the angry sea. Another crewman passed out but fortunately rolled down the scrambling net into the scuppers and not over the side.[17]

Eventually, large trawlers acting as armed boarding vessels were added to the line to facilitate lowering of boarding boats. It did not necessarily reduce the risk for the men going across, however.



A check of the cargo followed an inspection of the ship's papers. Note the armed sailor standing by. The inspecting officer is a RN lieutenant commander while his companion is a lieutenant of the RNR, identified by the braided sleeve-rings. (Author's collection)

The majority of the ships intercepted and inspected were Norwegian, Danish, Swedish or Finnish. In particular, there were numerous Norwegian vessels involved in the transatlantic traffic and virtually all of them were taken into Kirkwall for lengthy inspections, often involving a partial unloading of the cargo. In violation of international rules, the mail carried by the Norwegian ships was also inspected and in some cases opened or confiscated.

Most masters objected strongly to going to Kirkwall, claiming difficulties of navigation as they lacked detailed charts over Shetland. In addition, the shore lights were out, no qualified pilots were available, and there were no facilities for the ships waiting to be cleared. Several ships grounded during the winter and at least two were total losses.[18] The protests were dismissed, as were any claims for loss or damage arising from the search unless caused directly by one of the officers or men conducting the inspection. The Norwegian insurance companies were anxious about the added dangers the ships were exposed to and supplied masters with a document to be handed to the boarding officer when intercepted and ordered to a control base. The document held a protest against the diversion and claimed the right to seek compensation for any loss or damage occurring as a consequence. Instructions from the Admiralty were for the officers to receive the document without comment and refuse to sign any papers other than the log book while on board. The protests increased through the winter and there were episodes where masters refused to let their crew take the ship to a British port unless at gunpoint or under threat of being shelled. After a while, some masters took their ship directly to Kirkwall, knowing they would be sent there if intercepted. Others held as far north as possible, heading west of Iceland in poor weather in an attempt to avoid the British patrols.

Cruiser *Norfolk*, a trusty servant of the Northern Patrol. (Author's collection)

There was no uniform opinion in the British administration as to how to handle neutral ships, and the issue of forced diversion became the subject of much correspondence and many meetings between the Admiralty, the Foreign Office and the MEW during the winter. War trade and shipping agreements were signed with Norway, Sweden and Denmark in March–April 1940, to some extent regulating the issue of interception of merchant ships from these countries, but the inspections, and the protests, continued. The German invasion of Norway and Denmark on 9 April naturally changed the situation completely.[19]

Contraband

On 1 September, Germany could muster a merchant fleet of 2,466 ships larger than 100 tons, totalling some 4.5 million tons – ample, even in a war situation. Of the 850 largest ships, 432 were in home waters or the Baltic, 109 in friendly European ports (Spain or Italy), 65 in the West Indies or the Americas, 79 in the Atlantic and the rest largely east of Suez.[20] The first warning signal to German merchant ships was sent at 00:30 on 25 August. At first, they were only ordered to ensure full bunker tanks in the nearest convenient harbour, but by 09:00 on the same day, a second signal urged them to head for home or the nearest port of a friendly or neutral country outside regular shipping lanes and to avoid the English Channel.[21]

On 3 September, a few hours after the declaration of war, the destroyer *Somali* intercepted the 2,377-ton German merchantman *Hannah Böge* south of Iceland. A prize crew was sent on board, the German sailors put under lock and key, and *Hannah Böge* escorted to Kirkwall.[22] By the end of September, only one more German merchant vessel had been intercepted, the 4,160-ton *Minden*, which scuttled herself on the 24th off the Faeroes when the British cruiser *Calypso* ordered her to heave to. Meanwhile, 108 neutral merchantmen had been stopped, twenty-eight of them sent to Kirkwall for examination.[23]

German merchantmen gathered in neutral Curaçao in September 1939. *From left to right*: *Nordmeer, Patricia, Vancouver, Este, Seattle, Hannover, Wesermünde* and *Alemania. Seattle* later escaped and was sunk during the German invasion of Norway in April 1940. *Nordmeer* escaped to Spain in December 1939 and was used as a supply ship. *Hannover* attempted to escape in March 1940, but was intercepted by British patrols and eventually rebuilt as the escort carrier *Audacity. Wesermünde* was sold. The other ships were confiscated by Dutch authorities in May 1940. (Author's collection)

One reason for the low number of German ships intercepted was that many of those that had sought refuge in neutral ports in Africa, Asia and America were held back. During October, a number of them attempted to run the gauntlet, increasing the number of intercepts by the Northern Patrol.

On 19 October, *Gonzenheim* was intercepted by *Rawalpindi* south of Iceland, but scuttled herself before she could be boarded. Also on the 19th, *Scotstoun* intercepted *Biscaya* in the Denmark Strait. Her master decided not to scuttle and risk the life of his crew, and his ship was taken over by a prize crew which took her to Leith. The next day, *Transylvania* intercepted the tanker *Bianca* nearby, and she was also taken to Leith by a prize crew. *Gloria* and *Rheingold* were intercepted by *Sheffield* and *Delhi*, respectively, and both brought to Kirkwall.[24] On the 21st *Scotstoun* sighted *Poseidon* in bad weather and escorted her into lee off Iceland, where a prize crew was put on board, while the Germans took off towards land in their boats. The two ships lost touch in the worsening weather and when *Transylvania* eventually encountered the German ship on the 27th, the prize crew was taken off and *Poseidon* sunk by gunfire.[25]

In November, after an interval of some weeks, another wave of German ships attempted to slip through the Northern Patrol. Nine of these were intercepted over a period of eleven days, before *Gneisenau* and *Scharnhorst* disturbed everything towards the end of the month (see below). Three of the German ships were caught in the Denmark Strait, the remainder between Iceland and the Faeroes. Of the nine, five scuttled; there was virtually nothing the British sailors could do to prevent a determined crew sinking their own ship other than threatening to open fire or leave the lifeboats adrift on the open sea.

The 3,670-ton German *Borkum* was intercepted by the AMC *California* in the Denmark Strait on 18 November. A prize crew was transferred, but on the 23rd *Borkum* was attacked by *U33* and damaged by torpedo and gunfire off the Orkneys. The abandoned *Borkum* drifted ashore in Papa Sound as a total loss. (Author's collection)

Laurentic ran into *Antiochia* south of the Faeroes while *Chitral* intercepted *Bertha Fisser* off the south-east coast of Iceland and *Transylvania* found *Tenerife*. All three scuttled themselves, while *Scotstoun* managed to send a prize crew on board *Eilbek*, taking her to the Clyde.[26] During October, fifty-three eastbound neutrals were sent to Kirkwall for inspection.

This inflow of German traffic prompted Admiral Forbes to send *Nelson, Rodney, Hood, Furious, Aurora, Belfast* and nine destroyers to assist the Northern Patrol on 15 October. The fleet encountered little during the week it was at sea, but to keep the destroyers from having to seek land, they were refuelled at sea from the capital ships, which was a distinctive first while at war.[27]

On 18 November, the 3,670-ton *Borkum* was intercepted by *California* in the Denmark Strait. A prize crew under Lieutenant Commander Moloney was transferred and course shaped for Greenock via Kirkwall. Five days later, on the 23rd, *Borkum* was attacked by *U33* and damaged by torpedo and gunfire off the Orkneys. Four of the German crew members were killed, but the rest of the Germans and British were rescued by armed boarding vessels *Kingston Beryl* and *Kingston Onyx*. The abandoned *Borkum* drifted ashore in Papa Sound as a total loss.[28]

Eventually, the flow of German merchant ships attempting to return home dwindled and intercepts became less frequent. Few days had much excitement. On 19 February, the 4,709-ton German cargo liner *Wahehe* was intercepted by the cruiser *Manchester* on station NP54 accompanied by the destroyer *Kashmir. Wahehe* was threatened at gunpoint to surrender rather than scuttle. Weather did not permit boarding, so *Kashmir* was detached, taking the unlucky German, which had left Vigo a week earlier, to Kirkwall.[29]

By early April 1940, fifty-eight German ships totalling some 300,000 tons had been intercepted by British warships, mostly by the Northern

Patrol. Some had been captured, but most had scuttled. Eighty-two ships totalling some 480,000 tons had successfully evaded the British patrols, reaching German-controlled ports.[30] About 250 German ships were still idle in some harbour or other around the word, and reports reaching the MEW indicated that the blockade was beginning to be felt in parts of the Reich's industry.

Sinking Rawalpindi

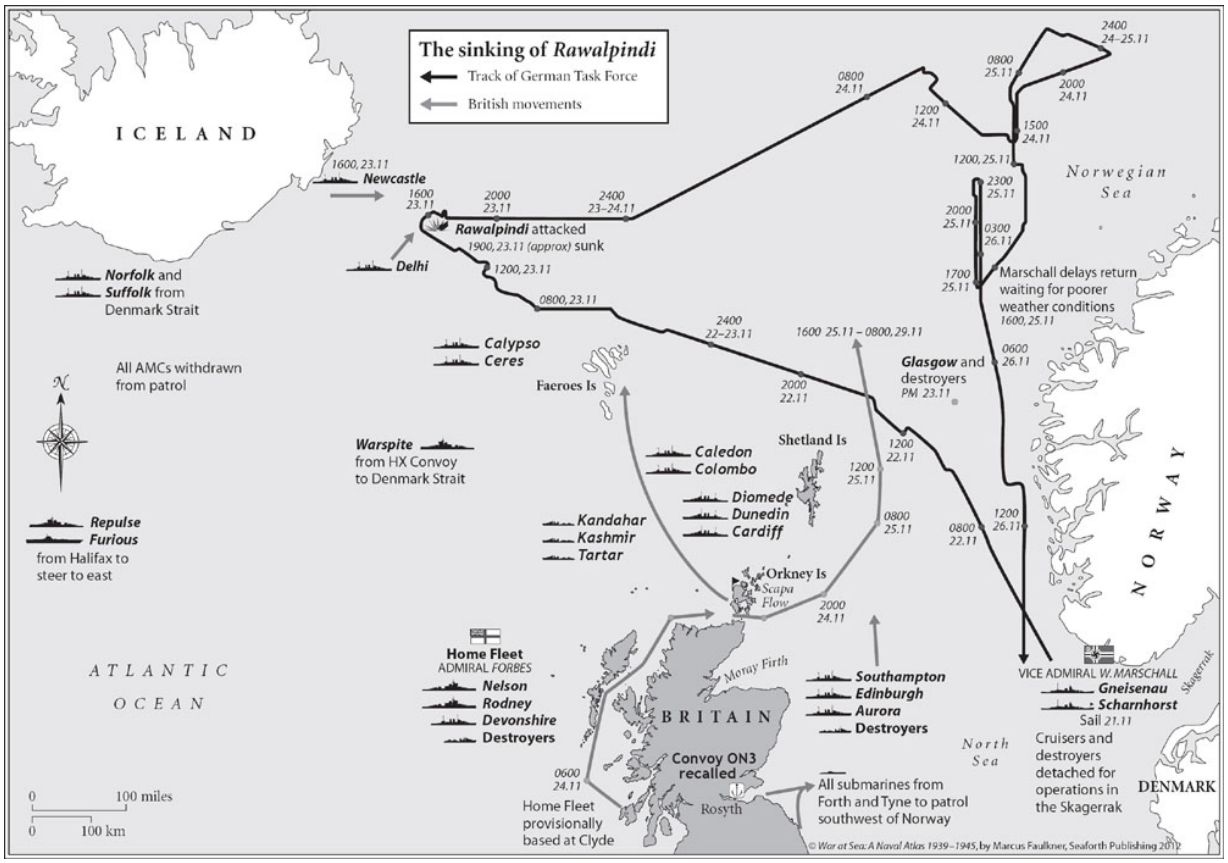
With *Deutschland* back in Germany in mid-November, the pressure increased on *Graf Spee*, and Raeder decided another sortie was needed to try to divert Allied attention from the South Atlantic. The newly appointed Flottenchef, Vice Admiral Wilhelm Marschall, was hence instructed to take *Gneisenau* and *Scharnhorst* to sea and pass through the Iceland–Faeroes Gap, feigning a breakthrough into the North Atlantic (Operation Berlin).[31] Instead of heading south, though, Marschall was to swing around Iceland, head east and then south along the Norwegian coast. Detection was considered inevitable, but the idea was to maintain pressure on the North Atlantic sea routes, sink cruisers if encountered and divert a maximum of Allied forces northwards. The occasion was considered favourable as the B-Dienst could report only *Nelson, Rodney* and one unidentified R-class capital ship in Scotland, while the others were further south or in the Atlantic, including the carriers.

Vice Admiral Marschall took to sea from Wilhelmshaven in the afternoon of 21 November in *Gneisenau*, followed by *Scharnhorst*. The cruisers *Köln* and *Leipzig* and destroyers *Arnim, Giese* and *Galster* were also in company but detached the following night and turned into the Skagerrak. The battleships headed for the Iceland–Faeroes Passage. Due to low clouds and poor weather, British reconnaissance aircraft detected neither of the two groups and the Admiralty had no idea that *Gneisenau* and *Scharnhorst* were at large.[32]

The weather cleared somewhat but stayed cold and, on the 23rd, just before dusk, a ship was sighted on *Scharnhorst*'s starboard bow. *Gneisenau* with the admiral was at this time some 12 miles away to the south. Kapitän zur See Kurt Hoffmann altered course to north and increased speed while informing Marschall at 16:07 (German Time – GeT) that a 'large steamer' had been sighted at 25 kilometres (15 miles) with 'two masts and one funnel'. Closing the unknown vessel, Hoffmann flashed an instruction to heave to and not use the radio, adding in English, 'What ship? Do not use your wireless'. The ship acknowledged, but increased speed and altered course away from the closing battleship. *Scharnhorst* had encountered *Rawalpindi* of the Northern Patrol.[33]

Kapitän zur See Kurt Hoffmann of *Scharnhorst*. (Author's collection)

The 16,697-ton *Rawalpindi*, built in 1925 for the P&O Line's India route, had been requisitioned by the Admiralty as an AMC in August. Of the thirty-nine officers and 210 ratings on board *Rawalpindi*, some sixty were of her original crew, mainly officers and petty officers, in addition to some key ratings. On the bridge was Captain Edward Kennedy, a sixty-year-old veteran of the Royal Navy, originally dismissed in the early 1920s, but – as were many of his age – found well suited for the task of taking an AMC to sea.[34] On 23 November, *Rawalpindi* was on station NP34, part of the 250-mile stretch between Iceland and the Faeroes. The cruisers *Newcastle, Delhi, Calypso* and *Ceres* were on similar stations, about 40 miles apart. *Newcastle* was westernmost of the line with *Rawalpindi* between her and *Delhi* while *Calypso* and *Ceres* were further east. *Cardiff, Colombo* and *Caledon* were south of the Faeroes, while the AMCs *Transylvania, California* and *Aurania* were in the Denmark Strait, as were the cruisers *Norfolk* and *Suffolk*.


The sinking of *Rawalpindi*
Track of German Task Force
British movements
ICELAND
1600, 23.11
Newcastle
1600 23.11
2000 23.11
2400 23–24.11
Rawalpindi attacked
1900, 23.11 (approx) sunk
Delhi
1200, 23.11
0800, 23.11
Norfolk and
Suffolk from
Denmark Strait
All AMCs withdrawn
from patrol
Repulse
Furious
from Halifax to
steer to east
Warspite
from HX Convoy
to Denmark Strait
Calypso
Ceres
Faeroes Is
2400 22–23.11
2000 22.11
0800 24.11
1200 24.11
1500 24.11
2000 24.11
2400 24–25.11
0800 25.11
1200, 25.11
2300 25.11
2000 25.11
0300 26.11
1700 25.11
Marschall delays return
waiting for poorer
weather conditions
1600, 25.11
1600 25.11 – 0800, 29.11
Glasgow and
destroyers
PM 23.11
0600 26.11
Norwegian
Sea
Caledon
Colombo
Diomede
Dunedin
Cardiff
Kandahar
Kashmir
Tartar
Shetland Is
1200 22.11
1200 25.11
0800 25.11
0800 22.11
1200 26.11
Orkney Is
Scapa
Flow
2000 24.11
NORWAY
Home Fleet
ADMIRAL *FORBES*
Nelson
Rodney
Devonshire
Destroyers
ATLANTIC
OCEAN
Moray Firth
BRITAIN
Convoy ON3
recalled
0600 24.11
Home Fleet
provisionally
based at Clyde
Rosyth
All submarines from
Forth and Tyne to patrol
southwest of Norway
Southampton
Edinburgh
Aurora
Destroyers
North
Sea
VICE ADMIRAL *W. MARSCHALL*
Gneisenau
Scharnhorst
Sail 21.11
Cruisers and
destroyers
detached for
operations in
the Skagerrak
Skagerrak
DENMARK
0 100 miles
0 100 km
© *War at Sea: A Naval Atlas 1939–1945*, by Marcus Faulkner, Seaforth Publishing 2017

Flottenchef Vice Admiral Wilhelm Marschall. (Author’s collection)

Earlier in the day, a Swedish freighter had been intercepted by *Rawalpindi* and Sub-Lieutenant Anderson had taken an armed boarding party across to sail her to a British port for control. Seeing them off, Captain Kennedy had resumed his patrol. Intelligence had been received that the German pocket battleship *Deutschland* was at large somewhere in the North Atlantic and Kennedy had orders to avoid combat if she should be encountered. The order was to radio the position of the enemy to the Home Fleet and stay in contact but out of trouble until a battle squadron could be dispatched. Easier said than done, as things turned out.

At 15:30, a warship was sighted. Kennedy ordered action stations, increased to full speed, 17 knots, and instructed the radio room to send a signal to C-in-C Home Fleet. At 15:51, Admiral Forbes received: '1 battlecruiser 280º, 4 miles, course 135º position 63º 41' N, 11º 29' W. Time of origin 15:45'. This was followed soon after by another signal indicating that the attacker was *Deutschland*. Kennedy, having been warned that *Deutschland* was in the Atlantic, appears to have misidentified the sighted ship in the fading light, in spite of the rather dissimilar appearance of the two ships. Within a few minutes, the latter part of the first signal was repeated with a garbled code group at the end. After that, nothing more was heard from *Rawalpindi*.[35]

While the signals were sent, smoke floats were lit and thrown into the water. They failed to burn properly, though, and Kennedy changed course, heading for an iceberg about 4 miles away to starboard for protection. The turn brought the battleship in clear view to port around 8,000 yards away and Kennedy opened fire at 15:55. By then a battle ensign was defiantly flying from the mast and all men on board the liner must have known with certainty that there was no hope for them. *Rawalpindi*'s eight unshielded 6-inch guns with worn bores and seized-up pivots were no match for a modern battleship with 11-inch guns. Quite the contrary: the large

superstructure of the liner presented an excellent target and, with her inferior speed, she could not run even if she wanted to.

Hoffmann, who except for a warning shot across *Rawalpindi*'s bow, had been holding back while repeatedly flashing 'Heave to' and 'Abandon your ship', realised with admiration that this one would not surrender even to vastly superior forces and ordered fire in earnest. *Scharnhorst*'s first salvo at 16:03 slammed into the boat deck of the merchant cruiser, killing almost everybody on the bridge except Kennedy and a few others. It also wrecked the radio room, halting further signalling. The second salvo burst in the engine room, destroying *Rawalpindi*'s dynamos and electrical system. Most of the ship was darkened and the ammunition hoists were stopped, so shells had to be manhandled. All guns were instructed to fire independently as fast as the shells could be brought up. After a brief lull when *Rawalpindi* was hidden by smoke and splashes for a few minutes, further 11-inch shells kept slamming into the doomed liner, silencing the guns one by one, setting her ablaze and killing men in large numbers. Captain Kennedy was killed when moving aft with some ratings to try to set up a smokescreen. One 6-inch shell from *Rawalpindi* landed on *Scharnhorst*'s quarterdeck but failed to penetrate the armour, causing only minor damage.

By now, *Gneisenau* had also arrived and in spite of valiant but inaccurate fire from the merchant cruiser's guns *Rawalpindi* was ripped to pieces within minutes. With nothing more to fire at, the German guns fell silent at 17:16 GeT; the encounter being over in a little more than ten minutes. *Rawalpindi* was ablaze from bow to stern and a devastating explosion rocked the ship as her forward magazine blew up a few minutes later. The forepart broke off and sank within minutes, while the larger after section capsized and sank some time later. Tragically, *Scharnhorst*, closing in the growing darkness, ran into and swamped several escaping lifeboats in the heavy sea when turning hard to avoid the explosion. An Aldis lamp flashed out of the smoke: 'Please send boats'. Unexpectedly, the Germans

responded. Sending their own boats was out of the question in the growing darkness and high seas, but Marschall ordered both ships to stop and pick up those survivors that could make it across. Precious few did.

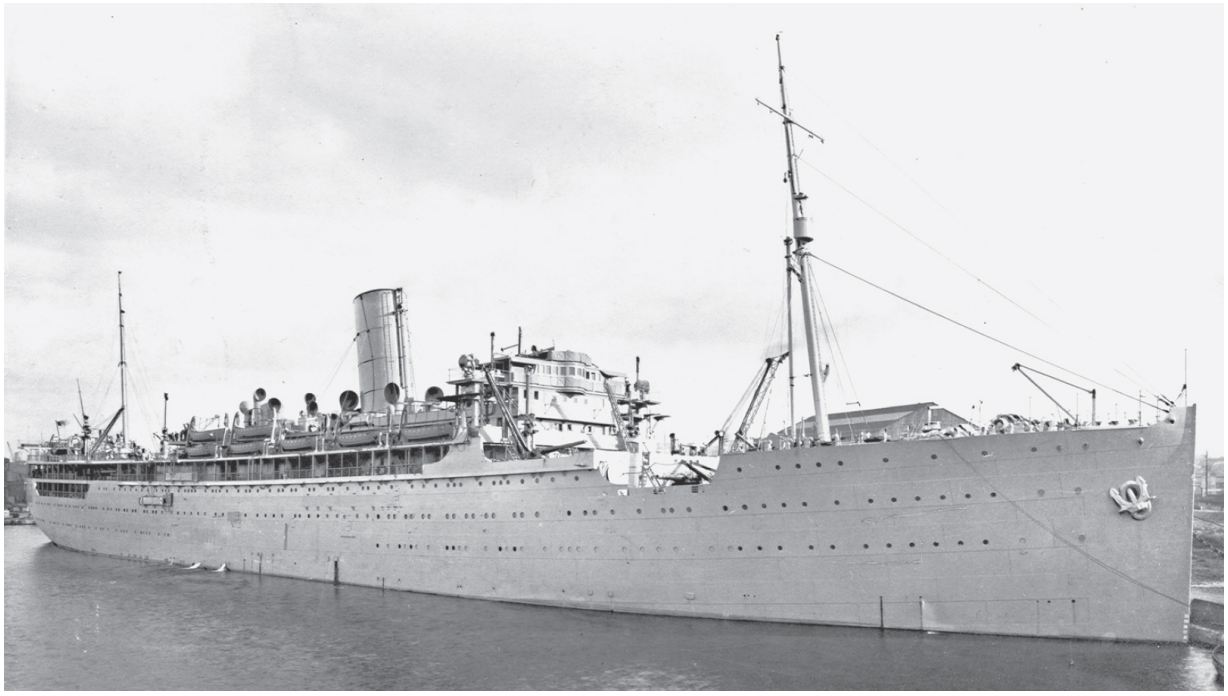
Thirty-eight survivors were rescued, seven by *Scharnhorst* and twenty-one by *Gneisenau* while ten men in a flooded lifeboat were picked up the following day by *Chitral, Rawalpindi*'s consort to the north; 238 men perished.

The rescue mission came to an abrupt halt when lookouts on board *Gneisenau* spotted an approaching warship. It was the British cruiser *Newcastle* approaching from her station next in line to the west as a response to Kennedy's radio signal. From her station in the next billet to the south, *Delhi* also hastened to the given location. *Newcastle* was the first to arrive. At first, searchlights were seen in the horizon and, some minutes later, her lookouts sighted a darkened ship 13,000 yards away. Two minutes later, a second ship to the right of the first was seen signalling to her consort. *Rawalpindi* was also in sight, burning furiously.

Captain Figgins of *Newcastle* submitted a signal to the C-in-C: 'Have sighted cruiser *Deutschland*, distance 13,000', followed by 'Lights of a second ship … approaching from dead ahead'. In all likelihood, Figgins assumed *Rawalpindi*'s first identification to be correct and took it for granted that he now faced the same adversary. The control staff on board *Newcastle* confirmed that the nearest ship was *Deutschland*, in spite of good visibility between the rainsqualls and a range of less than 12,000 yards.[36]

Vice Admiral Marschall decided to leave the scene and the two German ships vanished into a rainsquall, trailing a heavy smokescreen. Vice Admiral Horton sent orders to *Delhi* and *Newcastle* to shadow the German ships while *Calypso* and *Ceres* were to wait north of the Faeroes, preparing for a night attack. *Newcastle* had no radar, though, and the battleships were never seen again. The onboard B-Dienst notified Marschall of the British

radio transmissions and the misidentification of the ships. Later, several signals from Berlin arrived, reporting the gathering of several cruiser and destroyer groups.



The 16,697-ton *Rawalpindi*, built in 1925 for the P&O Line's India route, was requisitioned for conversion to an AMC in August 1939. (P&O via Richard Osborne)

The Home Fleet was in hot pursuit. At the Clyde, Admiral Forbes took to sea as fast as possible with *Rodney, Nelson* and *Devonshire*. Clyde was far away, though, and Forbes would have an extra twenty-four hours' steaming time compared to leaving from Scapa Flow. Cruisers *Diomede, Dunedin, Colombo, Caledon* and *Cardiff* were to concentrate in the Fair Isle Channel between the Orkneys and Shetland. Destroyers *Kandahar, Kashmir* and *Tartar* were sent directly from Scapa Flow with orders to 'locate and shadow *Deutschland*'. Other destroyers and cruisers were spread in a search pattern to the north and east of Shetland. *Hood* and the French battleship *Dunkerque* were ordered by the Admiralty to steer north too, while *Warspite* was instructed to leave the Halifax convoy she was escorting and steer towards the Denmark Strait. In the North Sea, convoy ON-3 just out of Methil was ordered back. Coastal Command was asked to provide all possible capacity for air search as the situation developed. All AMCs of the Northern Patrol were ordered back to the Clyde.[37]

Vice Admiral Marschall never left any record of his considerations other than the mission reports, but at this stage he must have felt that his mission was accomplished. Penetrating further into the Atlantic would not be possible without a severe risk of running into Allied capital ships. He had to the best of his knowledge created the intended diversion even if he had not 'rolled up the Northern Patrol'. Nevertheless, *Gneisenau* and *Scharnhorst* were in a dangerous situation. Incoming intelligence reports indicated that British ships were heading north and east, trapping them in the Norwegian Sea, and Marschall would have to rely on weather if he were to get safely back. A German weather ship in the Arctic reported a developing storm heading for the Norwegian coast, where it would hit Stadtlandet at dawn on the 26th. Trusting his meteorologists, Marschall doubled back for a few hours and then turned south again at maximum speed in driving rain and poor visibility.

No intelligence of *Deutschland*'s return to a German port was available to the Admiralty at this time, and Admiral Forbes believed, based on the false identification report from *Rawalpindi* and *Newcastle* that he was chasing the pocket battleship and a cruiser. Having neither carriers nor any intelligence that could read his opponents' radio transmissions, Admiral Forbes was left with the Coastal Command aircraft and his own cruisers and destroyers to search for the German battleships. Spread thin and without radar, the patrols found nothing, and *Gneisenau* and *Scharnhorst* in tight formation slipped through the British picket line in the atrocious storm – the worst on record for many years. German long-distance flying boats, braving the horrendous weather, actually sighted some of the British cruisers and could give Marschall extra advice on danger spots. Back in Wilhelmshaven on 27 November, both battleships had sustained sea damage and had to dock for a few weeks of repair. The operation made big headlines in the German radio and press. On instructions from Raeder, though, who was well aware of the confusion within the Royal Navy as to which ships had been involved, there was no mention of the ship's names.[38]

The apparent ease with which the German battleships operated in the North Atlantic shocked the Admiralty as well as the British public. When the survivors came home and told their story, the impression of inferiority grew further. Above all, a grave weakness in British intelligence regarding the movements of the major German warships had been exposed. German capital ships could not be left roaming at will; it was vital to intercept them before they could break out and become lost in the vast, open expanses of the Atlantic. That was a belief which would steer the operational thinking of the Admiralty for the first part of the war – to the extent that German intentions would be completely misread in April 1940.

In the SKL, the assessment of the sortie was more sober, even if here there was also elation at first and satisfaction that the new battleships had shown themselves to be operationally well suited for the harsh conditions of

the northern seas. Admittedly, both ships had sustained sea damage, but they had been able to maintain speed and battle-readiness during most of the operation and had been further into the Atlantic than any German naval ship during the last war. Nevertheless, a single auxiliary cruiser was not a particularly impressive trophy for two battleships, and the Northern Patrol had not been substantially weakened – all the more so as the battleships had hurried into the rain at the first sight of what must have been an inferior cruiser. The Kriegsmarine's assessment of the mission diplomatically stated that 'it would have been within the tactical remit of the operational orders to seek and destroy the approaching ship, which must have been assumed to be another enemy warship.'[39] Konteradmiral Kurt Fricke, the chief of operations at SKL, was not impressed, particularly at the battleships scuttling out of the way once a dark silhouette was sighted. 'Battleships are supposed to open fire – not lay smokescreens,' he scribbled on Marschall's battle report.[40] Moreover, only a limited strategic advantage had been achieved, contrary to orders, as the battleships had retired northwards and not laid an obvious track into the Atlantic, which could have diverted large British forces.[41]

Vice Admiral Marschall defended his actions with reference to the approaching darkness and the risk of torpedo attacks. The doctrine held that larger ships should avoid contact with torpedo-carrying vessels at night unless properly protected. With the low strength of serviceable capital ships in the Kriegsmarine, Marschall argued that his orders did not give him liberty to risk substantial damage or loss of any of the ships under his command. Fricke was not satisfied and wrote a critical memorandum to Marschall, copied to Raeder.

Admiral Schniewind, the Chief of Staff of the SKL, thought this was a bit too much and advised Raeder to file the memorandum and let the issue rest.[42] Raeder was in a difficult situation. He and the SKL wished for results and felt pressured to show that their demand for resources to build and

commission the battleships was justified. On the other hand, Marschall's caution was not without reason. The ships were vulnerable and there were over 2,000 men on board each. Hitler demanded results but did not appreciate the risks. In the end, Raeder could not find a clever solution to the challenge. The controversy between the SKL and the Fleet Command would only widen: first during the Norwegian campaign, and eventually result in the loss of *Bismarck*. To restore some morale, it was decided that Group West should start planning for another operation with the battleships and the heavy cruiser *Admiral Hipper* as early as possible in 1940 and this time be prepared to make a stand in the Iceland–Faeroe gap, rolling up any British ships encountered there before moving into the Denmark Strait, south towards the west of Ireland or north to halt the British traffic on Narvik.[43] Raeder was unaware that he had a problem in his lap that would eventually cause his own forced retirement. Nobody in the SKL or OKM realised that at this point the Kriegsmarine had gained an upper hand in the North Sea and northern waters and, due to the lack of suitable surface ships, a golden opportunity to operate resolutely against the Royal Navy was missed.[44]

Admiral Forbes waited in vain for a sighting report from his patrolling cruisers, destroyers and aircraft until the 29th. At that time *Rodney* had developed rudder defects and had to be sent back to the Clyde and eventually headed for the yards. Early that same morning, the Admiralty let Forbes know that it was becoming concerned over the number of ships maintaining relatively static positions in U-boat waters. In response, Forbes ordered his ships to sweep north, along the Norwegian coast, turning south when reaching 66º 10' N the next day. At this time, *Scharnhorst* and *Gneisenau* had long since docked in Wilhelmshaven. Rubbing it in for the frustrated Admiral Forbes, *Nelson* triggered a magnetic mine laid by *U31* when entering Loch Ewe in the morning of 4 December, suffering damage that would take her out of service for half a year.

The mystery of who actually sank the *Rawalpindi* lingered on. In a letter to the Admiralty in January 1940, Forbes held that the issue was:

> not a matter of academic interest to me, but one of some moment. If, in fact, the enemy were bold enough to send one or both of their battlecruisers to within 100 miles of Iceland to raid the Northern Patrol line then with our present inadequate intelligence and whilst Scapa Flow is unusable, at least 3 heavy ships should be kept at sea continuously.[45]

This would not be possible with *Nelson* and *Rodney* in the yards and it would be late December before *Repulse* and *Furious* were back and *Warspite* had arrived.[46] It would take several weeks before the Admiralty realised that it was *Scharnhorst* and *Gneisenau* that had been at large in the Norwegian Sea, even if accounts from the survivors very early on indicated that there were two ships of the same class with two turrets forward and very long forecastles.[47]

By 1 December 1939, the Northern Patrol had been re-established. The inherent vulnerability of the AMCs had been fully demonstrated, and it was concluded that cruisers should be used as much as possible in the Northern Patrol and the AMCs take over their places in areas away from likely direct contact with German surface forces. It was also concluded in Whitehall that the Northern Patrol was the key place to engage German raiders. As the *Graf Spee* episode had shown, once they were out on the trade routes, raiders were difficult to locate and engage. Fewer than a dozen regular cruisers were available to bring home, though, and it was clear that the AMCs would be relied on for a long time to come. Churchill concluded in a meeting on 22 December 1939 that no further AMC should be commissioned until further notice.[48] During the winter, the number of AMCs allocated to the Northern Patrol was, for several reasons, reduced to eighteen. Admiral Horton believed this was adequate during the winter, but held that by the time the Denmark Strait became ice-free in the spring, twenty-five ships would be required.[49] Through extended efforts, Forbes

managed to have two capital ships at sea most days of January 1940, providing cover for the Norwegian convoys and the Northern Patrol – either *Rodney* and *Repulse* or *Warspite* and *Hood*.

On 20 December, Vice Admiral Horton was given command of the Submarine Arm and Vice Admiral Robert Raikes took over the Northern Patrol. In January, both *Laurentic* and *Canton* ran aground, requiring significant yard-time for repairs, while the first of the converted vessels were taken in to be upgraded from their 'emergency' equipment status to a complete conversion.[50] Weather and ice-damage from extreme conditions in the North Atlantic also took its toll, as did collisions and general maintenance. Few AMCs spent more time at sea than in port during the first winter of the war. Up to the end of March 1940, *Chitral, Laurentic* and *Montclare* had spent over ninety days of the war at sea, while *Asturias, Aurania, California, Scotstoun* and *Transylvania* had over fifty. The rest of the AMCs assigned to the Northern Patrol in that period had fewer than fifty days at sea. At the end of January 1940, one cruiser and one AMC were regularly on patrol in the Denmark Strait, while nine to ten AMCs operated between Iceland and the Faeroes and two cruisers south of the Faeroes.

On the evening of 7 April, with reports of German capital ships moving north in the North Sea, all AMCs of the Northern Patrol were ordered to steer south-west and then head for the Clyde. The Admiralty interpreted the observations of the German ships involved in Operation Weserübung, the invasion of Norway and Denmark, to be an Atlantic breakout and did not wish to risk another *Rawalpindi* episode. When the intentions of the Germans became clear after a day or two, the patrol was re-established, with the ships further west than usual. Their main task now would be to intercept all Norwegian and Danish ships, preventing them from continuing to their home country and falling into German hands.[51]

— 21 —
Winter War

Frozen Hell

IN THE EARLY HOURS of 30 November 1939, Russian troops crossed the Finnish border at more than twenty-five locations, commencing an arduous campaign, diminutive in the context of WWII, but with far-reaching consequences.

The Russo-German Non-Aggression Pact of 22 August 1939 shocked and bewildered Europe. It had a secret addendum that would have been even more deplored, had it been known at the time. It divided the continent into a German and a Russian sphere of influence, within which Hitler and Stalin would give each other free rein. Finland, eastern Poland and the Baltic states were inside the Russian domain, and Stalin lost no time in helping himself to his part. On 17 September, Russian troops began moving into eastern Poland and by the end of October Estonia, Latvia and Lithuania were firmly occupied.

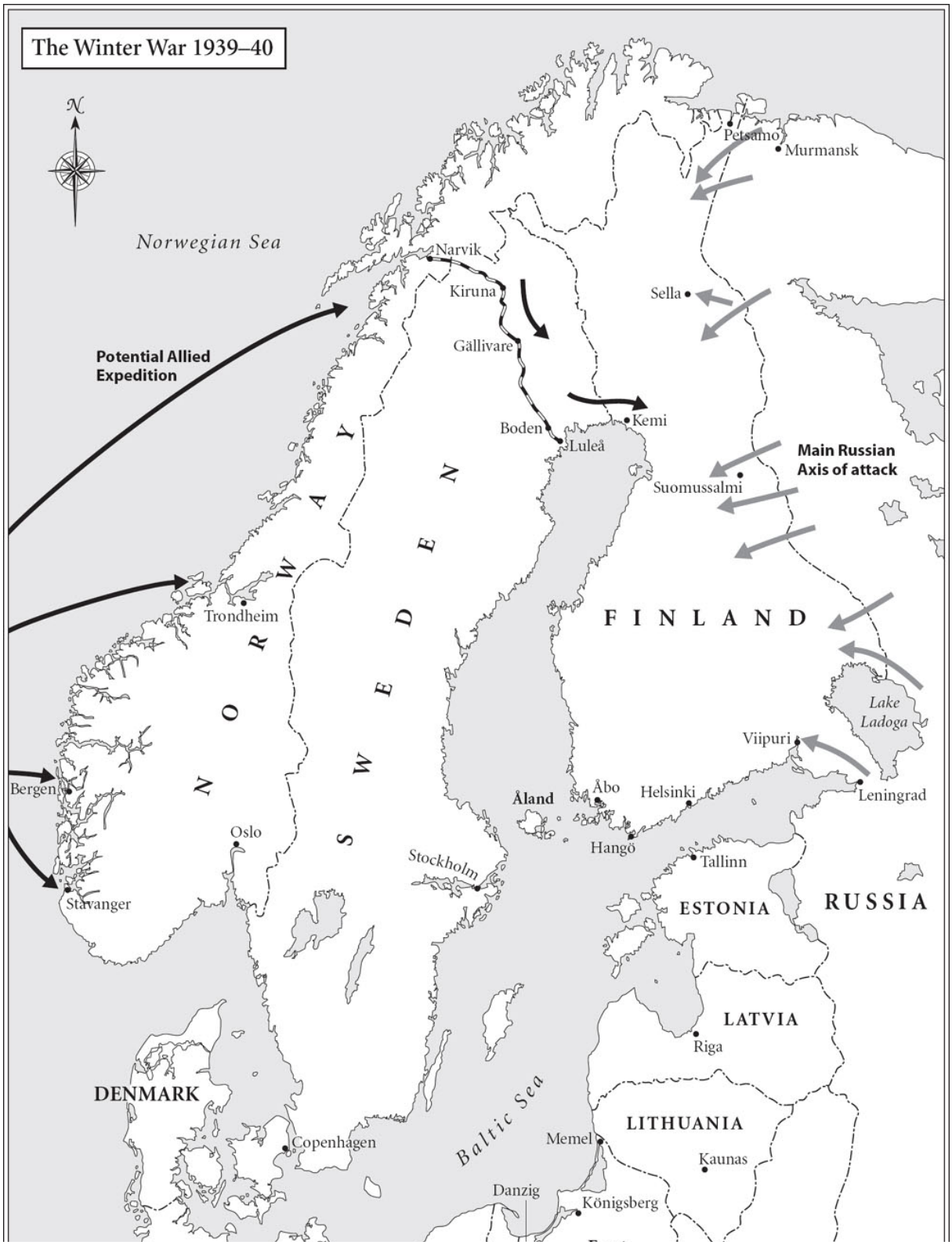
Meanwhile, Helsinki was approached with demands for negotiations regarding a 'treaty of mutual assistance', similar to those made with the Baltic states. Included were demands for lease of naval and air bases at Hanko and Suursaari, on Finnish soil, control of Åland and other islands in the bay and a large strip of land on the Karelian Isthmus to the north of Leningrad as well as land on the Kalastajasaarento Peninsula east of the Arctic port of Petsamo.[1] The demands, effectively placing Finland under Russian control, were not acceptable – all the more so as some of the areas in question were densely populated. Stalin, leading the negotiations in

person, dismissed any attempts at a compromise. Quite the contrary – when the Finnish delegation would not accept the initial demands, he added claims and accused the Finns of shelling Soviet territory, causing Russian casualties. Then, at dawn on 30 November, some 600,000 Soviet troops with over 1,000 armoured vehicles crossed the Finnish border in several places from the Karelian Isthmus to Petsamo. Later that same day, Helsinki was heavily bombed by the Red Air Force, without any declaration of war, killing more than 200 unprepared civilians.[2]

Stalin intended honouring the terms of the Non-Aggression Treaty with Hitler, which put Sweden and Norway inside the German sphere of interest, and the troops attacking Finland had firm orders to stop before reaching the Swedish border. A Russian presence in Norway as far south as Narvik or even Trondheim with naval bases and control of Swedish iron ore made a disturbing scenario for the British Cabinet and General Staff and would have endangered the stability of all Northern Europe.[3]

The Russians anticipated conquering Finland in ten to twelve days, which was probably a major factor prompting the attack in the first place. To the surprise of everybody but themselves, the Finns, led by Field Marshal Carl Gustav Mannerheim, put up a spirited defence.[4] Making full use of ski troops, terrain and climate, helped by the coldest winter in over a hundred years with temperatures frequently below -40º centigrade, around 200,000 Finnish soldiers managed to bring the Red Army to a halt. In spite of an almost total lack of antitank weapons, armoured vehicles and heavy artillery, the numerically inferior Finns held the line and even won several spectacular victories. The Russians, who had no winter equipment and hardly any medical support, suffered grievous losses. The Finns were accustomed to the climate and, equally important, were wisely clothed, using civilian sweaters, jackets and footwear whenever needed. In the Arctic, the port of Petsamo fell, barring Finland’s only access to open sea,

but everywhere else – and notably on the Karelian Isthmus, the main axis of attack – the Russian advance was stalled by Finnish tenacity.



East
Prussia
• Hamburg
G E R M A N Y
0
200 miles
0
200 km

Finland suffered terribly under the Russian onslaught both at and behind the front. (Author’s collection)

At first, Mannerheim did not allow journalists at the front line, but after a while he changed his mind and soon the world press was filled with photos and stories of white-camouflaged ghost soldiers operating behind enemy lines, cutting superior Russian units to pieces with submachine guns before vanishing in the whiteness, leaving only a few ski tracks. In Helsinki, a popular coalition government led by Risto Ryti with Väinö Tanner as foreign minister further strengthened the country's will to maintain independence.[5]

And this was certainly needed. Russian aircraft, swamping the Finnish air defences, bombed and strafed bases and front lines while others repeatedly bombed Helsinki, Viipuri, Hanko, Kotka and other cities, causing terror and civilian casualties. Incendiaries were extensively used with devastating results on the largely wooden Finnish houses. Many bombers were shot down by the Finnish fighters, but there were always more to come, flying out of airbases in Estonia. The need for fighters and A/A guns was desperate.[6]

In January, Mannerheim made the first informal approach to the Allies for help. The French government was immediately positive and suggested landing an expeditionary force in Petsamo, retaking it from the Russians. The British foresaw endless supply problems through ice-covered waters as well as a certain conflict with Russia and vetoed the proposal.[7] An intriguing period of diplomatic manoeuvring beyond the scope of this narrative followed. What at first looked to be a peripheral campaign of no significance for anybody but the Finns would, over the course of three and a half months, topple the French government, bring the Allies to the brink of war with Norway and Sweden, and stretch the Franco-British alliance to a point where it started to affect the conduct of the war. Above all, it would make it absolutely clear to the British Admiralty and Cabinet that, due to the new German Luftwaffe and Kriegsmarine, the Baltic had been closed to the Royal Navy.

By the beginning of February, the Russians renewed their offensive on the Karelian Isthmus while the bombing of Helsinki and Viipuri was intensified.[8] The Finns, tired and reeling under the weight of the massive onslaught, started falling back. By mid-February, the front line was at the Mannerheim Line, the final defences before Helsinki, and a Russian breakthrough would be catastrophic. The Finnish government was faced with accepting Russian terms for a negotiated peace or appealing for Allied help, even if it by now was obvious that the Allies' priorities lay with the Swedish iron ore rather than with Finland. On the other hand, if Moscow believed an Allied expeditionary corps was under way, Russia might be less adamant and conclude a ceasefire at reasonable terms. A trickle of volunteers had already started, but as these more often than not were enthusiasts rather than soldiers and not at all accustomed to the rough conditions that faced them, they mostly freed up Finnish soldiers for the front line by being used in auxiliary roles.[9] By the end of February, the Finnish lines still held, but the need for immediate reinforcement, including aircraft and heavy weapons, was desperate. Mannerheim warned his government of an inevitable Russian breakthrough. At the same time, approaches through Stockholm indicated that Moscow might be willing to negotiate a peace that, though under harsh terms, would leave an independent Finland. On 8 March, it became known in London that a Finnish delegation had gone to Moscow two days earlier to start negotiations.

The Scandinavian people were enraged by the Russian assault on Finland. Many wanted to fight alongside their neighbours but the governments were unwilling to let a large part of the already-meagre neutrality defence slip out of their respective countries. Being seen to give official help to Finland might provoke Moscow and was no good either.

Sweden did not wish to compromise its neutrality and the government insisted that all war materiel passing through the country should be discreet,

‘in the form of Finnish purchases from abroad’, and that any accompanying technical personnel should be ‘volunteers travelling as private persons’. On the other hand, the majority of the equipment and supplies that Sweden itself sent to Finland, 20–30 per cent of its prewar stocks, was continuously replaced from Germany. The Molotov–Ribbentrop Pact prevented Germany from engaging on the Finnish side or allowing the direct sale of arms and supplies, but the indirect method through Sweden worked well. There is little doubt that this arrangement came with a stern warning from Berlin to refrain from any direct involvement in the war.[10]

In Norway, the official supply of anything but humanitarian aid was denied by the government. No officers were given leave from service to fight alongside the Finns, in spite of repeated requests, and public recruitment was prohibited. A dozen surplus field guns with 7,200 rounds not included in the mobilisation depots were eventually sent in utmost secrecy in February 1940. Privately arranged fundraising campaigns and collections flourished. More than 64,000 rucksacks, most of them filled with sweaters, mittens, caps, scarves and tobacco, went east, as did 50,000 pair of boots and 16,000 woollen blankets. A quiet unofficial flow of petrol, aviation fuel, rubber and other supplies followed, classified as humanitarian aid. Eventually 725 Norwegians defied the restrictions and went east too. Less than half of them ended up in northern Finland, too late to make a difference.[11]

Some of the 725 Norwegians who defied the government's restrictions and volunteered for Finland. Very few of these would actually end up at the front in time to make a difference. (Author's collection)

The estimates of war materiel sent from the Allies and neutrals vary between the sources. Mussolini in particular allowed vast sales of weapons and ammunition from Italy to Finland, including fighter aircraft, but required hard cash in return. British sales and donations to Finland included 20 million rifle rounds, 40,000 hand grenades, 200 Boys antitank rifles with 10,000 rounds, sixty-six A/A guns of various calibre with some 190,000 rounds, twenty-five howitzers and thirty field guns. Repeated requests from the Finnish Embassy in London in mid-January for modern fighter aircraft eventually resulted in a number of Hurricanes being provided. The Admiralty also agreed to supply twenty Skuas and thirteen Rocs, but these never left Britain. In all thirty-three Gloster Gladiators, twelve Hurricanes, seventeen Lysander reconnaissance aircraft and twenty four Blenheim bombers were sent to Finland.[12] French sales to Finland included thirty MS-406 fighter aircraft, 5,000 light machine guns with some 11 million rounds, 20,000 hand grenades, 40 antitank guns and 24 field guns and howitzers.[13]

Virtually all of the aircraft purchased in Britain that arrived in Finland came via Norway. In January, permission was given for British aircraft to land in Norway during transit to Finland at Sola airfield outside Stavanger and, if necessary, Fornebu outside Oslo. In addition, a substantial transit of weapons, supplies and ‘volunteers’ was allowed throughout the winter via Norwegian harbours and railways. Most went through Oslo and Bergen, but Stavanger, Trondheim and Narvik were also used, creating a significant logistical challenge. Weapons, guns, ammunition and even aircraft packed in unmarked crates were loaded from British or British chartered ships into railway carriages, discreetly guarded by Norwegian soldiers against sabotage. Two British officers, Captains Croft and Munthe, worked in Bergen harbour for several days ‘on the rather contentious problem of transferring [the crates] from the ships to the trains that were to take them across Norway and Sweden, without disclosing the fact that they were really weapons, tanks and aircraft’.[14] In addition to the Allied supply ships,

the ON convoys from Methil to Bergen routinely included one or more Finnish ships bringing munitions and arms. It is difficult to ascertain accurate numbers for the transit volumes, but it must be assumed that a significant part of the Allied aid to Finland passed through Norway. The goods were all steered towards Torneo in western Lapland, where it had to be reloaded onto Finnish railcars due to a different gauge-width, resulting in a lengthy transfer of up to a month between leaving the British port and reaching the Finnish front.[15] In January, the Norwegian government agreed to 'facilitate the passage of volunteers […] singly or in small numbers'.[16] Shortly after this, significant numbers of British and French soldiers started to appear at various places in Norway, not necessarily in 'small numbers', sometimes in uniform and not always as discreet as intended. Many of them were technical personnel, but a good number obviously officers and regular soldiers. A complaint from the German Embassy resulted in a demand from the Norwegian government that the 'volunteers' should travel without uniform, but this does not appear to have reduced their number significantly.

The Norwegian Foreign Office managed to keep information of the Finland traffic out of the Norwegian newspapers and radio by appealing to the danger this would pose for Norway, were it to become known. The resulting lack of publicity is to the credit of both the editors and the civil servants involved. The Allied governments, on the other hand, must have known very well how their aid was routed to Finland. It is therefore somewhat difficult to understand why the Allies did not at least quietly acknowledge this traffic, but kept blaming the Norwegian and Swedish governments for being indifferent and craven when discussing the Scandinavian countries. The actions of the Norwegian and Swedish governments stretched the rules of their neutrality considerably in the Allied direction, and, had its full extent been recognised in Moscow or Berlin, there is little doubt that the reaction would have been fierce. With

hindsight, it is quite possible that the official criticism, and lack of even indirect recognition of having contributed significantly, created an impression in both Oslo and Stockholm that the Allies would prioritise their own interests, whatever the issue.

Icebound

Immediately after the attack on Finland, the Soviet Union declared a blockade of the Finnish coast and a 20-mile zone outside, warning neutral ships to stay away. The blockade was enforced by naval aircraft and submarines.

Compared to the intense fighting on land, naval activity during the Winter War was low. The Northern Baltic began to freeze during December, making the movement of any ship very difficult without the help of ice-breakers. During January, the ice-cover moved south, eventually covering most of the Baltic.

The Soviet naval forces in the Baltic, the Red Banner Baltic Fleet commanded by Vice Admiral Vladimir Tributs, was a formidable force on paper. After the Russian occupation of the Baltic states, it possessed bases all along the coast from Leningrad to east Prussia, but was largely without training or logistics for offensive operations. Two battleships, *Marat* and *Oktjabrskaja Revolutsija*, one heavy cruiser, *Kirov*, some twenty destroyers, fifty submarines, and more than fifty motor torpedo boats and other vessels made up its core. Many of the submarines and smaller vessels were not manned and hence not operational.

In contrast, the Finnish Navy was a small coastal force. Two small cruisers, *Ilmarinen* and *Väinämöinen*, five elderly submarines, four sloops and some thirty to forty smaller vessels and auxiliaries were all it had. The two cruisers, each equipped with eight 10.5-cm guns, were moved to the harbour in Turku as floating batteries and remained there for the duration of the war. Most of the rest of the Finnish fleet was deployed as anti-invasion

defences at Åland and Hanko. As the ice kept most of the Finnish ships stationary, men not necessary to fire their guns were assembled in two units acting as coast-defence infantry.

The two Finnish cruisers, *Ilmarinen* and *Väinämöinen*, with eight 10.5-cm guns each, in the harbour at Turku, where they remained as floating batteries and A/A protection for the duration of the war. (Author's collection)

Finnish coastal artillery was defending important harbours and naval bases. Some were large, modern guns (30.5-cm) but most were of Russian origin, 23.4- and 15.2-cm being the most abundant calibre. The Soviets knew the locations of the Finnish coastal batteries well, but improved ammunition and good handling skills extended their range beyond expectations. During December, before the ice grew solid, Finnish coastal forts on the Karelian Isthmus were repeatedly shelled by *Marat* and *Oktjabrskaja Revolutsija* as well as destroyers, but suffered only limited damage as the battleships were kept at a respectful distance by the defenders.

On 1 December 1939, the brand-new *Kirov* evaded serious damage by a hair's breadth. In good weather conditions with excellent visibility she and two destroyers approached Russarö, south of Hanko. To their surprise, the Finns opened fire at a range of 13 nautical miles with 23.4-cm guns. After a few salvoes, *Kirov* was straddled and made a hasty retreat – seventeen men dead and over thirty wounded. The destroyer *Stremitelnyj* was also hit. Two weeks later, on 14 December, the destroyers *Gnevny* and *Grozyashtchi* attacked the lighthouse and fort at Utö, but again precise Finnish gunnery drove them away, *Grozyashtchi* having been damaged.

In all, Russian submarines sank five merchant ships during the Winter War; one Estonian (*Kassari*), two German (*Reinbeck* and *Bolheim*), one Swedish (*Fenris*) and one Finnish (*Wilpas*). Four other Finnish freighters were lost to aircraft, having been bombed in port. The only Finnish naval loss during the Winter War was the escort *Aura II*, which was damaged beyond repair during an anti-submarine operation when a depth-charge thrower misfired and the depth-charge exploded while still on board. The Soviet Baltic Fleet lost submarine *S-2* in December 1939 when she ventured into a German minefield. After the ice prevented submarine operations, the blockade was enforced solely by aircraft, including mines dropped from the aircraft.[17]

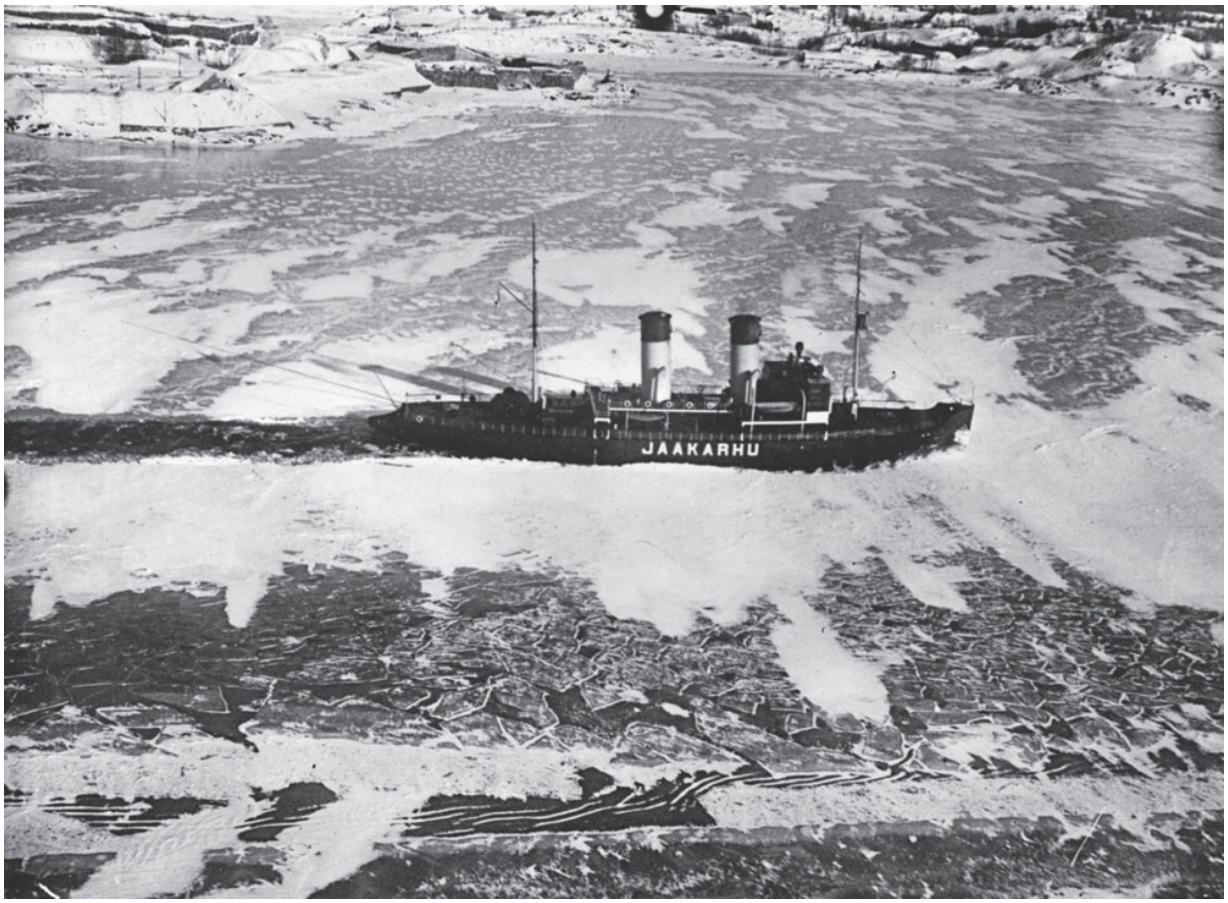
German activity in the eastern Baltic during the Winter War was limited to the zone between Swedish territorial waters and 20º E to avoid incidents with Russian submarines. Swedish minefields laid near Åland in December made the iron-ore traffic from Luleå rely on Swedish escort. German protests were dismissed and the minefields remained.[18]

A Blanket of Snow

During the winter, the Finnish government realised that large-scale Allied support was unlikely, in spite of a growing flow of Allied supplies coming in through Norway, with more to follow. France and Britain appeared unable to reach a consensus on what to do. The feedback to Helsinki on what to expect, and when, was so diverse that it did not appear to be realistic to expect anything significant in time. Mannerheim, convinced that any Allied expeditionary force would arrive too late and be largely insignificant, repeated his warnings of an imminent Finnish collapse. On 11 March 1940, the delegation already in Moscow to discuss terms for a ceasefire was given open authority to seek a solution that would end the war. The Finnish soldiers prepared for another Russian offensive.[19]

It appears that Russian intelligence realised neither the critical state of the Finnish defences, nor that the Allied offer of help was unviable. Had Stalin pushed his generals for one more massive attack, his men might very well have advanced all the way to Helsinki. Fortunately for the Finns, the Russian dictator lost his nerve before they ran out of ammunition. His armies were suffering terrible losses and, with the spring thaw approaching, risked becoming bogged down in the extensive wetlands and forests. Every week that passed increased his political humiliation and vulnerability towards a vengeful Japan in the east and an ambitious Hitler in the west – as well as Britain and France. Accepting the inadequate performance of his troops, Stalin abandoned his occupation plans and settled for a compromise,

leaving Finland independent. The Finnish delegates in Moscow signed the armistice on 12 March and the Winter War ended the next morning.



Ice conditions in the Baltic were harsh during the winter of 1939/40, making icebreakers indispensable. (Author’s collection)

Finland had to cede 10 per cent of its territory to Russia – a total of some 15,500 square miles, including areas of significant population, forests and industry. Viipuri, the country's second-largest city was annexed, as was the entire Karelian Isthmus, all of Lake Ladoga and Hanko. In the north, large areas in Salla and Kuusamo were lost as well as the Kalastajasaarento Peninsula. Petsamo proper was returned to Finland.[20] In all, the homes of some 12 per cent of Finland's population were suddenly on Russian territory.[21] The people in the ceded area were given the choice of becoming Soviet citizens or migrating to Finland. Most if not all of the 450,000 people in question moved, despite being left destitute and homeless, creating additional problems for the already hard-pressed nation. Twenty-five thousand Finns were dead or missing and fifty-five thousand wounded – a terrible price for a country of only 4 million people.[22]

While most Finns were bitter at having to pay the price for a war they did not start and hardly believed they had lost. It is certain, though, that Finland would not have remained independent unless the Russian invasion forces had been halted in November. Had Russian forces occupied all of Finland in 1939, the country would have been incorporated into the Soviet Union, as the Baltic states were.

Most Russians wondered what it had all been about. Exact Russian losses are unknown, but they are certainly staggering in men and materiel. One Russian general commented, 'We have won just enough ground to bury our dead.'[23]

— 22 —
No Friends[1]

Northern Neutrality

FROM BEING OF VIRTUAL insignificance to imperial Britain during the summer of 1939, Scandinavia would become the main focus of the British War Cabinet during the winter of 1939/40.

In July 1935, shortly after the Anglo-German Naval Agreement had been signed, *The Times* wrote that, for the Nordic countries, the treaty ended,

> seventeen years of effortless security, during which they began to feel that they, alone among European States, had solved the problem of peace and disarmament. […] To Denmark, the agreement means that the Belts and the Sound recover the strategic importance which they had before and during the War, with the consequence that the problem of Danish national defence will have to be considered afresh.[2]

Two years later, in 1937, in spite of threatening clouds, a long-term defence regulation was approved by the Danish Folketing (Parliament) whereby the navy would be reduced to a fleet of small multi-purpose vessels over the coming decade. Two years further on, in May 1939, a non-aggression pact with Germany was signed, whereafter the C-in-C of the Danish Navy, Viceadmiral Hjalmar Rechnitzer was invited to Hitler's birthday celebrations in Berlin. There he had meetings with Admiral Raeder and Kapitän zur See Fricke, his Chief of Naval Operations. In these meetings, Rechnitzer was assured that Germany had no wish, or indeed plans, to violate Danish neutrality. Quite the opposite – Germany was militarily, strategically and commercially of the opinion that Denmark

should remain neutral. British intervention in the Baltic was unlikely and there was no need for Denmark to consider anything but complete impartiality, should a war become inevitable. On the other hand, it was important that Denmark retained its sovereignty over Iceland; a weakening of this might give Britain an excuse to take control of the island, which would be 'rather inconvenient', considering German operations in the Norwegian Sea.[3]

At the outbreak of the war, the situation for Denmark quickly became precarious: on 4 September, British aircraft dropped bombs on Esjberg, missing their target at Brunsbüttel, 110 miles to the south. This was duly excused, but on 2 October, the British naval attaché in Copenhagen, Captain Nicholas Diggle, told Viceadmiral Rechnitzer that a neutral Denmark was a major inconvenience for Britain.

Worse, the German naval attaché in Copenhagen, Kapitän zur See Hans Henning, approached Admiral Rechnitzer on 16 November, with a suggestion that the Danish mine barrages in the east should be extended and deepened. In spite of earlier assurances to the contrary, he explained, the German Navy now had reason to believe that British submarines were planning to enter the Baltic through neutral Danish waters. Additional mines were laid, but, to the surprise and relief of the Danish government, there was no British reaction whatsoever. That Denmark was firmly under German influence did not seem to disturb many in London as long as the import of bacon and dairy produce was maintained.[4]

Following the positive relationship developed between Norway and Britain during WWI, the rapport between the two countries remained friendly but distant in the 1920s and 1930s. In May 1933, their commercial relationship was regulated through an extensive trade agreement, whereafter it was assumed in London that Norwegian dependence on British naval supremacy was so resilient that no further concern was needed. Apparently, it was never considered that Norway's strategic position had become radically

altered as a result of the technological development of Europe's armed forces. Neither was it recognised that Norwegian faith in British determination and ability to curb German expansionism faded markedly as a result of the Munich crisis and, above all, the German occupation of Prague.

Denmark and Germany signing a non-aggression pact in May 1939. German Foreign Minister Joachim von Ribbentrop sits to the left, the Danish Foreign Minister Peter Munch to the right. (Author’s collection)

The news of the German attack on Poland was received with apprehension in Norway. The pity for Poland and anger with Germany was unanimous, but so was the feeling that this was not Norway's war and, on 1 September, the government promptly issued a declaration of neutrality. When Britain and France declared war on Germany two days later, the neutrality was extended also to cover this conflict. The main Norwegian perimeter would be the coastline, and mobilisation of the navy and air force was considered adequate in addition to manning of key batteries of the coastal artillery. No minefields were laid. During September, the general situation stabilised and both the government and population felt they could cope. Certain goods and services became limited, but the war seemed far away to most people.

On 9 September, Commanding Admiral Henry Diesen reported to the Ministry of Defence that the mobilisation of the reserves of the Royal Norwegian Navy had been concluded and received approval to initiate requisitioning of civilian auxiliaries to fill the gaps. By the end of September, some 110 ships were in commission, of which half were auxiliaries.[5] To man the vessels, reserves were called and a number of qualified NCOs were given temporary rank to serve on the auxiliaries. By the end of 1939, around 5,000 men and officers were in service with the RNN, and 3,300 with the Coastal Artillery. In addition to enforcing their neutrality, the navy was tasked with protecting Norwegian civilian vessels, keeping the sea lanes free of mines and assisting any vessel in distress in or near Norwegian waters. Force should only be applied in certain special situations or after express permission from the commanding admiral. In the case of foreign warships attempting to enter the restricted areas, or *krigshavn*, all necessary means should be applied after due warning.[6] Defence against a large-scale attack was considered needless and ignored.

The Neutrality Act granted unarmed merchant ships, whether from a nation at war or not, right of passage inside the 3-mile zone, provided they

followed certain rules. Most importantly, a nationality flag should be shown at all times and if approached by a Norwegian naval vessel the ship should immediately heave to, provide necessary papers and assist the boarding officer in an inspection. Guns should be stowed away or made unserviceable during the transit and the use of radio was not permitted at all. Warships were exempt from inspection but could not anchor and had to depart Norwegian waters within forty-eight hours. Submarines had no admittance to Norwegian waters at all, unless in distress.[7]

In late August 1939, the British Foreign Office concluded that 'the sympathies of both the [Norwegian] Government and people would be likely to favour the British cause, to a greater extent perhaps than in any other country.' It was also recognised that King Haakon had a strong pro-British inclination and that large groups of the armed forces had their affinities in the west – particularly within the navy – and there was no reason to fear that Norway would ever side with Germany. Meanwhile, Foreign Secretary Halifax asked the COS on 24 August to assess the commitments implied should the Norwegian government be informed 'confidentially but formally' that Britain would come to Norway's assistance if there was German aggression. COS replied on 4 September that Germany, in view of Norway's economic importance, was unlikely to violate Norwegian neutrality, unless provoked by an Allied intervention and/or an interference with the export of iron ore. A German seaborne operation against western Norway was considered 'impracticable' due to British naval superiority. Were Germany to show any aggression, though, it would be in British interests to come to Norway's assistance and COS had no objections to letting the Norwegian government know this in confidence.

Hence, the British minister to Norway, Cecil Dormer, was instructed on 11 September to give a confidential assurance to Halvdan Koht, Norway's minister of foreign affairs, that Britain would give his country support against German aggression and would consider 'a German attack on

Norway as tantamount to an attack on Britain'. It was underlined that the 'encouragement' was intended to secure Norwegian cooperation in the planned blockade of Germany and definitely not 'equivalent to a public guarantee of the kind given to Poland or Romania'. Returning from his meeting with Koht, Dormer reported to London that Koht 'made no remark but it will probably have had a good effect'. Koht wrote that the assurance pleased him, but as he 'did not wish to tie [Norway] closer to Britain than it already was', he replied that he did not believe Germany 'would do anything like that against us as there was nothing to gain'. On the 22nd, Dormer was back. This time to assure that Britain would respect the declared Norwegian neutrality, but added that this would only apply as long as Germany did the same. Again Koht did not respond much, but later wrote that this visit caused him concern, as it had been made clear that British respect for Norwegian sovereignty would depend on London's interpretation of third-party action, not on Norway's own handling of affairs.[8]

During the autumn of 1939, Norway's strategic importance for Britain gradually materialised for the War Cabinet and its advisers. In addition to its merchant fleet, the country was the source of a number of strategic raw materials such as nitrates, ferroalloys and non-ferrous metals, as well as fish, fish products and whale oil, which Britain needed but also sought to deny to Germany.

In June 1939, the Norwegian merchant fleet consisted of some 4,400 ships totalling more than 4.8 million gross tons or 7 per cent of the total world tonnage. Two-thirds were modern motor ships, with a large proportion of independent tankers.[9] When the war commenced, initiatives were taken by the British government to sign an agreement for the use of the Norwegian fleet as well as a general war-trade agreement to increase the export of strategic goods to Britain while limiting the sale and re-export of Norwegian goods to Germany.[10] The subsequent negotiations, which started

in the second half of September, were tough, not least because London was in a position to apply strong pressure. A large part of Norwegian imports came through British-influenced harbours and could be slowed down or stopped through obstructing the ships in a number of ports and checkpoints. On the other hand, the British urgency for tonnage gave Norway a certain bargaining power. Though separate in nature, the two negotiations became heavily interlinked, not least as the British government used the one to obtain advantages in the other.[11] By mid-November, consensus was reached, agreeing the conditions for some 150 of the largest and most modern tankers and a minimum of 700,000 tons of Norwegian merchant tonnage to sail under British charter, flying the Norwegian flag. The Norwegian government ratified the Shipping Agreement in late November and the War-Trade Agreement in February. By 8 April 1940, 2.45 million tons of Norwegian vessels were under British charter, of which 1.65 million tons were tankers.[12]

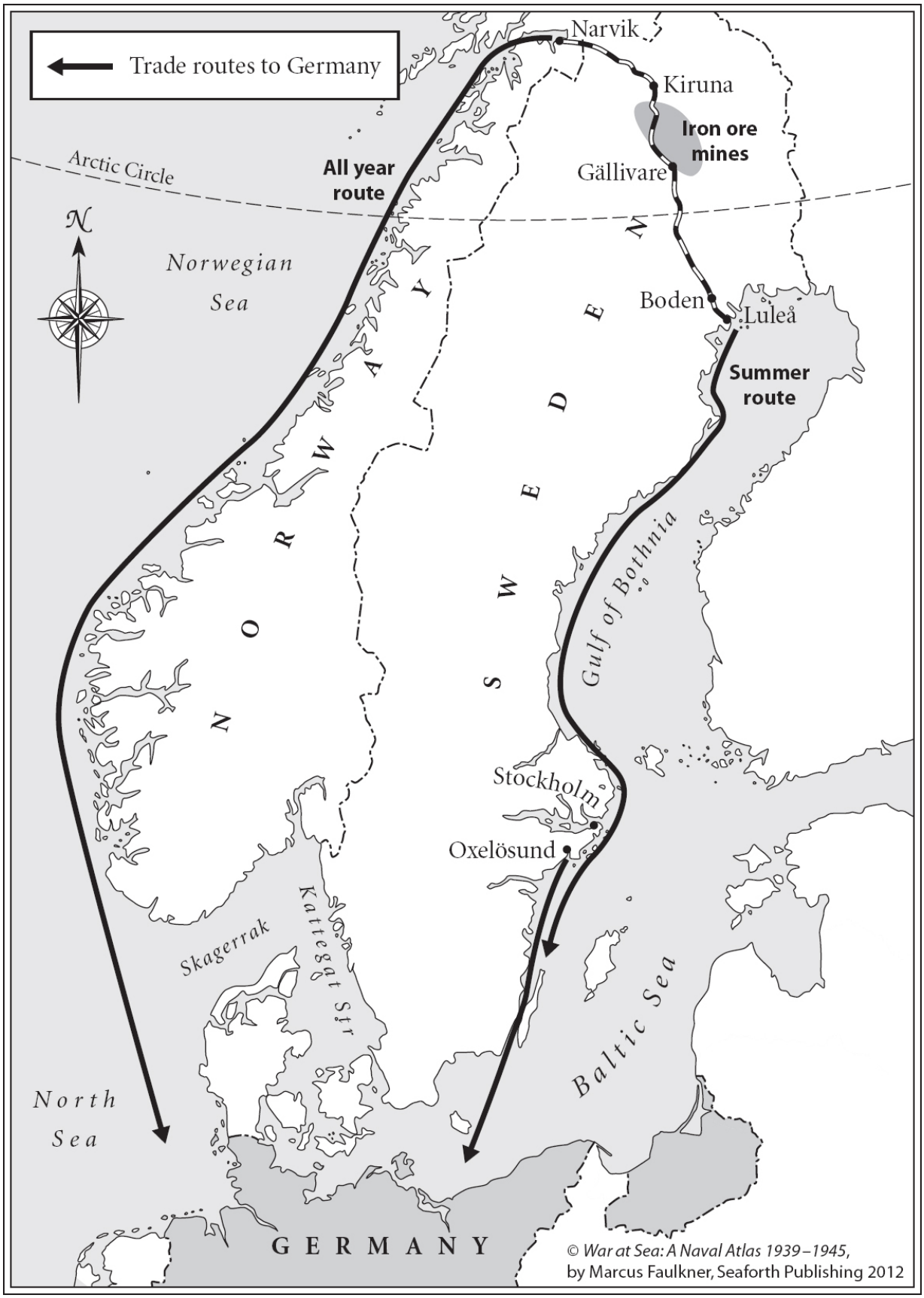
Iron Ore

In the inter-war period, the British Cabinet considered the relationship with Sweden the most important in Scandinavia. The high importance was mainly on account of the Lapland iron ore, but also because Sweden was more commercially and economically mature and Swedish diplomats more experienced, with better networks than the younger nations of Norway and Finland. To some extent, this, combined with Norway's perceived dependence on British naval protection, made Chamberlain and his government close their eyes to the development of the political and strategic situation in Scandinavia.

Narvik, a focus of attention in 1939/40. The iron ore quay and loading facilities are seen at the far side of the harbour. (Author’s collection)

When German industry started to recover from the financial crisis in the mid-1930s, some 70 per cent of its iron-ore consumption had to be imported and from 1935 to 1939 this import rose from 14 to nearly 22 million tons. High-grade Swedish iron ore accounted for almost 9 million tons of the import and virtually half the German steel factories were dependent on the phosphor- and sulphur-rich Swedish ore, for which there were few alternatives. As early as November 1934, Hitler expressed concerns that it would not be possible for Germany to wage war unless the regularity of iron-ore supply from Scandinavia could be safeguarded. In September 1939, Germany's supply of iron ore from France was cut off completely, and the overseas supply reduced to a trickle by the Allied blockade. Ore from Russia, which had been envisaged to come as a result of the Molotov–Ribbentrop Pact, never materialised and in spite of intensified steel production from scrap iron, German dependence on Swedish iron-ore rose.[13]

The majority of the Swedish iron ore was mined in the Kiruna and Gällivare areas in Lapland, just north of the Arctic Circle.[14] The Kiruna ore was largely exported via Narvik in Norway all year round. The Gällivare ore went mainly via Luleå in the Gulf of Bothnia, which could handle up to 30,000 tons per day, when it was ice-free. Purpose-built railways connected the mining areas with both ports. In the winter, when the Gulf of Bothnia froze and Luleå became icebound, normally from late November to mid-April, exports went solely from Narvik. The German take of the Swedish export exceeded 70 per cent on average during the pre-war years while the British take was around 16 per cent. During the latter half of the 1930s, the share of the Swedish ore exported via Narvik that went to Germany was steadily reduced, largely as the volumes going to Britain and other countries increased.


Trade routes to Germany
Narvik
Kiruna
Iron ore mines
Gällivare
All year route
Arctic Circle
N
Norwegian Sea
NORWAY
SWEDEN
Boden
Luleå
Summer route
Gulf of Bothnia
Stockholm
Oxelösund
Skagerrak
Kattegat Str
Baltic Sea
North Sea
GERMANY
© War at Sea: A Naval Atlas 1939–1945, by Marcus Faulkner, Seaforth Publishing 2012

At the outbreak of war in September 1939, all German ore ships were held back by the SKL. Within two weeks, though, the situation in the Baltic was under control and the ore traffic through the Baltic fully resumed. Sixty-six ships were active, of which sixty-one loaded at Luleå.[15] Shortly after, the Ministry of Trade (Reichswirtschaftsministerium – RWM) started evaluating measures to re-establish the traffic through Narvik as well, in preparation for when the ice would close the route to Luleå. The first German ship headed for Narvik on 25 September and, by early November, some ten ships were involved in the ore traffic with Norway, increasing to over twenty by year-end and fifty by early March. Throughout 1939, Germany imported as much Swedish ore as could be supplied, building up stores, and in December 1939, some nine months of peacetime consumption were in reserve. On 18 December 1939, the last ore transport of the year left Luleå. From then until the ice broke again in the Gulf of Bothnia, virtually the entire German take of Lapland iron ore would pass through Narvik.[16]

For Winston Churchill in the Admiralty, Narvik became an obsession. On 19 September, he brought up the issue of 'Norwegian transportation of Swedish iron ore from Narvik' for the first time with the War Cabinet. He was fully behind the recently initiated negotiations for chartering the Norwegian merchant fleet, he said, but once this had been secured, focus should be on severing the export of iron ore from Sweden to Germany – if necessary through mining the Norwegian Leads.[17] The Cabinet accepted the importance of the ore import for Germany, but Churchill could get no support to try to stop it other than through diplomatic means, and his proposal for the consideration of 'alternative means' was deferred. On the 29th, in a memorandum to the War Cabinet, Churchill again tried to persuade the War Cabinet that, once the chartering of Norwegian tonnage was settled, prompt action in Norway was needed:

An adequate supply of Swedish iron ore is vital to Germany, and the interception or prevention of these Narvik supplies during the winter […] will greatly reduce her power of resistance. For the first three weeks of the war, no iron-ore ships left Narvik. […] Should however, the supplies from Narvik to Germany start moving once more, the situation will need to be reconsidered with a view to more drastic action. Our relations with Sweden require careful consideration.[18]

Churchill was clearly of the opinion that the advantages of denying the benefits of the use of neutral Norwegian waters in general and the ore shipments from Narvik in particular outweighed the moral and political impacts that might arise from enforcing this. Neither does it appear that he was much concerned with what would happen to the British off-take of ore from the same source. The Cabinet would not yield, though, partly as no German ore ships had yet left Narvik since the outbreak of war. Chamberlain and Halifax were convinced that political pressure and trade arrangements would make the Scandinavian states limit their connections with Germany. In addition, there was a strong fear of negative reactions from the USA and other neutral countries if Britain were to initiate offensive actions, violating Scandinavian neutrality.[19]

The First Lord was not at ease. In a 'Note on the war in 1940', which he wrote on Christmas Day 1939, there is a revealing sentence: 'The great question for 1940 […] is whether and how the Navy can make its surplus force tell in shortening the war, and of course the amphibious operations to seize Narvik and the great ironfield present themselves in light of decisive action.' In a note to his senior officer on the 27th, though, he stated that he was opposed to any drastic operations such as landing forces or stationing ships in Norwegian waters, which had been suggested to him. Instead, he asked to have investigated the option of severing the Leads by placing a minefield 'at some lonely spot on the coast as far north as convenient'.[20]

During the first seven months of the war, the total ore export from Narvik to Germany was 762,615 tons versus 797,372 tons to Britain. Hence, the majority of the iron ore shipped from Narvik in the autumn of 1939 actually went to Britain, some fifty British ships being involved by

early 1940. Indeed, the Cabinet discovered during a meeting in the autumn of 1939 that the UK stocks of iron ore had been seriously depleted and that Britain had only one week's supply left. Severing the Swedish export of iron ore through Narvik would hurt Britain more than Germany in the short run. There was also a significant export of timber and pulp from Finland to Britain over Narvik during the autumn of 1939, even if this diminished as the war in Finland progressed.

Moreover, it was spelled out in a report from the Intelligence Department of the Ministry of Economic Warfare to Churchill in November that halting only the traffic through Narvik would at best have limited consequences for Germany and, from March/April onwards, with the Gulf of Bothnia ice free, it would be no more than a nuisance. The same conclusion was presented to the whole Cabinet in December and the MEW added that 'the principal argument put forward by the First Lord in favour of action in Norwegian waters was to be held invalid.' In an updated report from the MEW to the War Cabinet in January, the focus was on denying Germany the Swedish iron ore and Narvik was not mentioned at all. In fact, although German industry undoubtedly suffered due to the Allied blockade, it was never critically short of iron ore, tin, copper, nickel, chrome, oil, rubber or any other material vital for the war production in this phase of the conflict. Supplies from eastern Europe, pre-war stockpiling and replacement products more than made up for the Allied obstructive efforts. As long as Churchill and his advisers *believed* that severing the iron ore supply via Narvik would be critical for the war effort, however, facts were of limited consequence.[21]

Due to Churchill's initiatives, other parts of the British military also started looking at Norway during 1939. On 31 October CoS suggested that 'a small British force, say a Brigade Group, based on the Narvik–Boden railway and operating in support of the Norwegians and Swedes, might have an effect out of all proportion to its size.' General Ironside, the Chief

of the Imperial General Staff (CIGS), told his staff colleagues on 16 November, though, that he was not in favour of sending land forces to Norway. ‘To hold Narvik against any considerable attack’, he held, ‘would require a division at least. If it is essential to stop the export of iron ore from Narvik we should have to consider a full sized expedition.’ Ironside saw the advantages of taking the war to Scandinavia, but if it was to be done, it needed an ambitious operation securing control of the Lapland ore deposits with Norwegian and Swedish cooperation.

On 24 November, the Admiralty issued a signal to the Home Fleet that German ships attempting to avoid interception by entering Norwegian territorial waters were to be ‘followed and engaged’. This was modified the next day to be ‘except when this would endanger life in towns or villages’. If so, the German ship should be left where it was under close watch while the Admiralty was notified and decided on further action. It was also said that ‘endeavour should be made to engage the vessel before she enters [neutral Norwegian] waters so that the destruction may be represented as a continuation of engagement or pursuit already begun on high seas’. The issue was debated in the War Cabinet the next day and generally accepted while they ‘invited the First Lord […] and the Secretary of State for Air to consult together with a view to issuing amplified instructions in light of the discussion’. Later, Halifax had second thoughts and wished the instructions to be reconsidered, but this was not accepted.[22]

A week later, on 30 November, Churchill brought parts of the MEW report to the War Cabinet, concluding that ‘a complete stoppage of Swedish exports of iron ore to Germany now would, barring unpredictable developments, end the war in a few months’ as ‘Germany must import the first year of war at least 9 to 12 million tons of Swedish iron ore, if she is not to risk an industrial breakdown whether military activity increases or not.’ Persuaded by this, the War Cabinet endorsed an assessment of severing the route for the German ore ships from Narvik through

Norwegian territorial waters from a military and commercial point of view. The Cabinet also agreed to let the General Staff look at the feasibility of sending an expeditionary force through Narvik to the Lapland ore fields in Sweden. It was conveniently disregarded that the key point of the MEW report was that *all* Swedish export to Germany would have to be halted and, from early spring, any action in Norway was pointless as far as Swedish iron ore was concerned.[23]

On 16 December, Churchill submitted to the War Cabinet a lengthy updated memorandum regarding the Scandinavian issue and the iron-ore traffic. The document, which gives the impression of having been hastily written, most likely reveals his genuine beliefs, and is fundamental to understanding Churchill's urge for Narvik and his continued pressure on the Cabinet for laying mines in the Norwegian Leads:

> The effectual stoppage of the Norwegian ore supplies to Germany ranks as a major offensive operation of war. No other measure is open to us for many months to come. […] If Germany can be cut from all Swedish ore supplies from now onwards till the end of 1940 a blow will have been struck at her war-making capacity equal to a first-class victory in the field or from the air, and without any serious sacrifice of life. […] It is suggested that Norway, by way of protest, may cancel the valuable agreement we have made with her for chartering her tankers and other shipping. But […] Norwegian sympathies are on our side, and […] it is not reasonable to suppose that she will [retaliate] unless compelled to do so by German brute force. [If the war spread to Norway and Sweden] we can certainly take and hold whatever islands or suitable points on the Norwegian coast we choose. Our northern blockade of Germany would then become absolute. We could, for instance, occupy Narvik and Bergen, and keep them open for our own trade while closing them completely to Germany. It cannot be too strongly emphasised that British control of the Norwegian coast-line is a strategic objective of first-class importance. It is not therefore seen how; even if retaliation by Germany were to run its full course, we should be worse off for the action now proposed. On the contrary, we have more to gain than lose by a German attack upon Norway or Sweden.[24]

Operational Basis

There is no doubt that in the first months of WWII, Hitler, the OKW and the services considered a neutral Scandinavia the best solution for Germany.

Any strategic benefits from bases on the Norwegian west coast were subordinate, if considered at all. In Admiral Raeder's words, 'nobody in Germany – at least not in the navy – worried about Norway in the first weeks of the war' – as long as German access remained unrestricted.[25] In particular the south-west coast of Norway, the Danish Belts and the Swedish islands would have to remain outside the possession of an aggressor to Germany. The concept of an 'extension of the operational basis towards the north' was mentioned in the war diary of the SKL for the first time on 3 October, when it was argued that such an extension would improve the strategic and tactical position of the navy significantly and make a British blockade of Germany all the more difficult. Subsequently, Raeder asked the SKL and Dönitz to assess which places in Norway would be most suitable as bases and how they could be acquired. The SKL concluded that while a base on the Norwegian coast could potentially be of significant value to the Kriegsmarine, the distance from Germany and the vulnerability of supply and communication lines limited its practical usefulness. Realistically, only the U-boats would benefit in the current situation. German civilian shipping, including the ore traffic from Narvik, was well protected by Norwegian neutrality and needed no change in the situation. Possessing bases in Norway would end this advantage and the Kriegsmarine would become responsible for their protection – a task for which there was no capacity to spare. The clear recommendation from the SKL was thus to maintain the status quo. A neutral Norway was by far the best alternative – as long as there was no favourable treatment of the Royal Navy.

Dönitz answered that Narvik and Trondheim were suitable for U-boat bases in Norway. Both were outside the Bergen–Shetland Narrows, both were railway heads, ice free year round and had good, defendable port facilities. Narvik was the less favourable of the two, though, having its railway connection through Sweden and being very far from both Germany

and the Atlantic. Trondheim was ideal, in Dönitz's opinion, except that it might be vulnerable to British air attacks.

Führer Directive No. 6 was issued on 9 October. In this, Hitler reaffirmed his intentions of opening an offensive in the west as the next step. This, of course, meant a land war, focusing attention and prioritising resources towards the army while the Luftwaffe would have ample opportunities to become directly involved and thus claim its part of the resources. The Kriegsmarine would be relegated to a supporting role although offensive activities would be needed against British and French naval forces to keep them busy and draw the Home Fleet into the range of the Luftwaffe bombers and North Sea U-boats.

In the afternoon of the next day, 10 October, Raeder met with Hitler to give a general overview of the situation at sea and discuss plans for the continued blockade of Britain. Towards the end of the meeting, Raeder, to a question from Hitler answered that bases on the Belgian coast would be of limited benefit to the U-boats in enforcing the blockade of Britain. Instead, he advocated Trondheim as an alternative, in spite of the unenthusiastic attitude of his staff. According to his memoirs, Raeder reinforced his arguments by pointing to the fact that Admiral Canaris, head of the Abwehr, had informed him in person in late September that Britain was considering occupying bases in southern Norway. Should Britain possess such bases, Raeder stressed, the whole strategic situation in the north would change, seriously disrupting German naval and air operations against Britain while facilitating British attacks on Germany. Allied bases in Norway would also bring Sweden under British influence, he held, endangering German hegemony in the Baltic and threatening the vital supply of ore to Germany. This appears to be the first time that aggression against Scandinavia was discussed in the German High Command. Engrossed in the west, though, Hitler left the Norwegian issue dormant in the coming weeks. Raeder also put the Norwegian issue on hold for the moment, waiting for a better

opportunity. For now, blockade-runners, ore ships, trawlers and other civilian ships could move safely inside the Leads, sheltered from Allied intervention, as long as they adhered to the neutrality regulations. If Germany were to be threatened, the situation would be different.[26]

Three episodes were to raise the issue of Norwegian neutrality during the autumn and winter of 1939/40.

City of Flint

Having been captured by *Deutschland* in the North Atlantic, the American freighter *City of Flint* was sent towards Germany with a German prize crew under the command of Leutnant zur See Hans Pusbach, carrying the American crew and thirty-nine men from *Stonegate*, a British ship also sunk by the raider (see Chapter 17).[27] Captain Joseph Gainard stayed in operational control of his ship, but had to act upon instructions from Pusbach. *Flint*'s radio operator had disabled the radio when they were captured and Pusbach could neither send nor receive signals from Germany during the coming events.

City of Flint. (Author's collection)

To avoid interception by the British Northern Patrol, Pusbach ordered a route north of Iceland, heading for Tromsø in Norway. The large American markings on the side of the ship beneath the superstructure and on the top of the bridge house were painted over by the German sailors, as were the US Line stack marks. Instead, the name *Alf* was painted on the bow and stern and some makeshift Danish canvas flags hung over the sides. No other ships were sighted and *City of Flint* arrived in Tromsø in the afternoon of 20 October, flying a German merchant flag, but with the Danish disguise remaining. Leutnant Pusbach stated an urgent need for fresh water to the Norwegian authorities and requested permission to anchor. There was no lack of water, though. Captain Gainard had bluffed his German captor, expecting the Norwegians to check the water tanks and, finding them more than adequate, intern the ship for anchoring without sufficient cause. Permission to anchor was granted, but to Gainard's annoyance, the water tanks were topped up without any comments. Once the true identity of the ship had been established, the Norwegian inspection officer ordered the Danish flag replicas to be removed, together with the fake name *Alf*. Pusbach asked to be relieved of the prisoners from *Stonegate*, and this was granted. The Norwegian officer who came on board *Flint* to take the prisoners off informed Pusbach and Gainard that, according to the neutrality regulations, they would have to leave Norwegian waters at first light as the alleged reason for anchoring no longer prevailed. Next morning, 21 October, *City of Flint* was escorted into international waters.[28]

At first, Pusbach continued north to get away from British warships expected to be patrolling in the south. His idea was to loiter for some time and then re-enter Norwegian waters to travel south inside the Leads. Heavy fog in the Barents Sea forced him to seek port though, and, in the evening of the 23rd, *City of Flint* arrived at Murmansk. Here, Pusbach requested privilege of sanctuary for damage caused at sea as well as medical attention for one of his men. The sailor, who had a genuine appendicitis, was taken to

hospital. Finding no evidence of sea damage, the Russians arrested the German prize crew, while Captain Gainard was told his ship was free and he could leave as soon as the sailing papers had been made ready. The papers never arrived. Instead, under heavy pressure from Berlin, Pusbach and his men were put back on board *Flint* after five days, with orders to depart as soon as possible. This they did and on their way out, new maps were transferred from other German ships in Murmansk. On 30 October, *City of Flint* was back in Tromsø.[29]

Her return caused embarrassment to the Norwegian government. German protests at the earlier eviction had been received, claiming that the neutrality regulations had been applied one-sidedly against German interest. The Foreign Office categorically dismissed the allegations, but concluded that the regulations permitted the prize ship to pass 'inoffensively' through Norwegian waters as long as she did not stop or anchor. Stretching the rules, Pusbach proceeded slowly through Tromsø harbour while a tender loaded provisions, before continuing south through the Leads. The Norwegian destroyer *Æger* joined as escort with orders to intervene if she tried to stop or if Allied warships tried to intercept.[30] At midday on 1 November, Kommandørkaptein Trygve Briseid arrived with the minelayer *Olav Tryggvason* to take command of the escort operation and see *Flint* through Norwegian waters. *City of Flint* stayed close to land, while the escort positioned itself on the seaward side.

At 23:35 on the 2nd, while passing Holmengrå Lighthouse north of Bergen, where the Leads open up to the North Sea, a large ship approached from the west at speed, illuminating *City of Flint* with searchlights while signalling 'What ship?' towards *Olav Tryggvason*. Kommandørkaptein Briseid closed the intruder, sending: 'You are in Norwegian territory'. After a few minutes a reply came back from what turned out to be the British cruiser *Glasgow*: 'Thank you. I will not infringe your rights. I hoped your friend was coming out. Good night', after which the cruiser turned back to

sea. Unknown to Briseid at the time, Leutnant Pusbach had initiated scuttling procedures for *City of Flint*, and charges would have been set off, had not *Glasgow* turned back.[31]

Informed of the arrival of *City of Flint* in Tromsø, the British Admiralty aspired to catch her and Captain Frank Pegram had *Glasgow* in the right place based on signals received from a reconnaissance aircraft. During the night, *Glasgow* followed the ships from outside the territorial limit, but, satisfied that the Norwegian escort remained well astern, not guiding or assisting the German prize in any way, Pegram let them go when the ships went back into the Leads towards Bergen.[32]

At first light on 3 November, *City of Flint* and *Olav Tryggvason* passed Bergen. The night before, Pusbach had signalled that he had a wounded American sailor on board and, approaching Haugesund in the afternoon, he asked to stop and have the sailor hospitalised. Kommandørkaptein Briseid, who knew from his doctor on board *Flint* that the man was not in need of hospital treatment, denied the request and ordered Pusbach to proceed.[33] Just north of the entry to Haugesund, the two ships met another German vessel, the freighter *Schwaben*, on a northward course. To Briseid's annoyance, she passed close to *Flint* and a message was shouted across, instructing Pusbach to stop at Haugesund and get in touch with the German vice consul there. In spite of the protests from Briseid, *City of Flint* shortly afterwards dropped anchor in the harbour of Haugesund. Leutnant Pusbach informed *Olav Tryggvason*'s first officer, who came on board, that he was merely following instructions. The obviously stressed German officer was ordered to remain on board the ship and not to have any contact with land. Briseid positioned *Olav Tryggvason* close to *City of Flint* and asked the Naval Command for instructions.[34]

Captain Joseph Gainard. (Author’s collection)

Anchoring in Norwegian waters was a violation of Norwegian neutrality, and the orders to Briseid were simple: *City of Flint* was to be seized, the German crew arrested and the Americans set free. At 23:30, Kommandørkaptein Briseid manned the guns of his ship and sent an armed party of twenty-five men across. It was over in a minute. The Germans were caught unaware and did not resist. Pusbach, who had gone to bed, certain that the Norwegians would do nothing, was called and could only meekly accept the situation. After being allowed to pack a private bag each, the Germans were taken on board *Olav Tryggvason*. When Briseid asked why he had anchored, Pusbach answered, 'In accordance with orders from my government'. *City of Flint* sailed for Bergen early the next morning escorted by *Olav Tryggvason* with a content Captain Gainard the sole master of his ship again.[35]

The decision that the ship should anchor had been taken by the newly arrived German vice consul, Ewald Lanwer, in Haugesund. He was not familiar with the neutrality regulations and believed that *City of Flint* had the same rights as normal German merchantmen, which regularly dropped anchor at Kopervik, waiting for pilots to take them through the Leads.[36] Leutnant Pusbach later told the Norwegian officers interrogating him that he did not understand why he had been ordered to Haugesund. He had permission to sail through Norwegian waters and was certain he would have reached Germany safely. Most likely, the whole thing was a misunderstanding stemming from the fact that *City of Flint*'s radio was inoperative. The SKL had issued standard orders for all German merchant ships during October to contact the German vice consul in Haugesund for instructions of how and when to proceed from there towards Germany. Pusbach, who had been at sea since late August, was probably not aware of this procedure and may have believed that the order hailed to him from *Schwaben* was the result of an agreement with the Norwegian government he was not aware of. Raeder concluded:

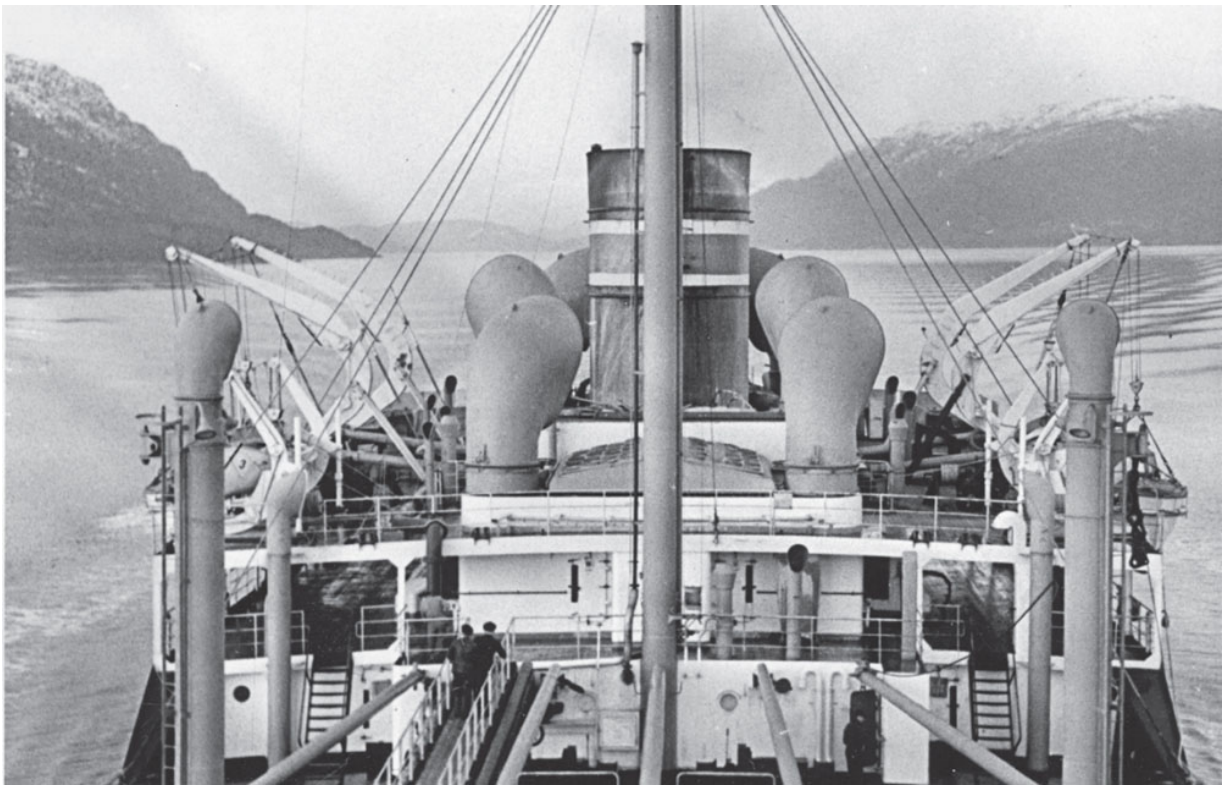
The *City of Flint* case has been mismanaged. Partly as a result of the Prize Officer putting into port at Tromsø and Murmansk, but above all owing to the fact that the Vice-Consul stopped the prize at Haugesund. As matters stand now, it appears best to allow the *City of Flint* to return to the United States unmolested [but] U-boats will be deployed as required in case confiscation becomes necessary again. The Führer agrees.[37]

German protests were swift, stating that the episode would have 'the sternest consequences' and that Germany 'reserved the right to take all measures considered necessary'. The Norwegian Foreign Office held they had acted according to the neutrality regulations, which were well known to Germany, and added that from their side, the case was closed. A low-key exchange of notes between the Foreign Office and the German Embassy followed, indicating that the Germans were not altogether unhappy over the way the case had been solved and that they had made their point. The US minister, Florence Harriman, came to Bergen, where *City of Flint* had been taken. Giving numerous interviews to American and European journalists who flocked to western Norway, she expressed satisfaction that the ship and its crew had been liberated and with the way the Norwegian authorities and navy had handled the matter. In British, French and American press, the Norwegian government was congratulated for a firm response to a violation of neutrality and a 'splendid example of courage and independence'. Minister Dormer, on instructions from London, informed Koht that a release of the internees would be considered a 'stretch of neutrality in Germany's favour' and be met with British protests, but also excused *Glasgow*'s intrusion into Norwegian waters off Holmengrå. Koht had already decided the Germans would not be released and said nothing. After unloading her original cargo in Haugesund and Bergen, *City of Flint* went to Narvik, where she took on board a load of iron ore before heading back to the USA in January.[38]

Westerwald

After *Deutschland* had commenced her return to Germany, Korvettenkapitän Peter Grau waited another two weeks before receiving orders from the SKL to follow suit with the supply ship *Westerwald*. In spite of the fact that *Westerwald* was unquestionably a warship, his instructions were to head for the Norwegian coast and, letting the ship appear to be a regular merchantman, follow the Leads home. In the early morning of 17 November, *Westerwald* entered Norwegian waters north of Trondheim, requesting a pilot. A German merchant flag was flying from her after mast and a shipping company stack mark had been painted on her funnel. The local pilot who came on board was not authorised to take the ship as far south as she intended, though, and Grau was advised he had to go to Trondheim.

To stay outside Trondheim *krigshavn, Westerwald* anchored at Hestvik, where she was approached by the patrol vessel *Nauma* for inspection. Grau informed that his ship was in passage from Murmansk to Hamburg and requested a pilot to take him south through the Leads. Questioned as to whether his ship was armed, he stated she was not, but, looking around, the inspecting officer quickly discovered that the ship was not only armed, but quite heavily so. Two 150-mm guns were concealed in collapsible crates amidships and one aft. In addition, there were A/A guns on the bridge. When confronted with this, Captain Grau answered that there was a war on and that the guns were for self-defence. Further inspection below decks was refused, Grau arguing that he carried nothing but 8,000 tons of diesel oil and was heading for home.



Westerwald in the Norwegian Leads. (E Skjold collection)

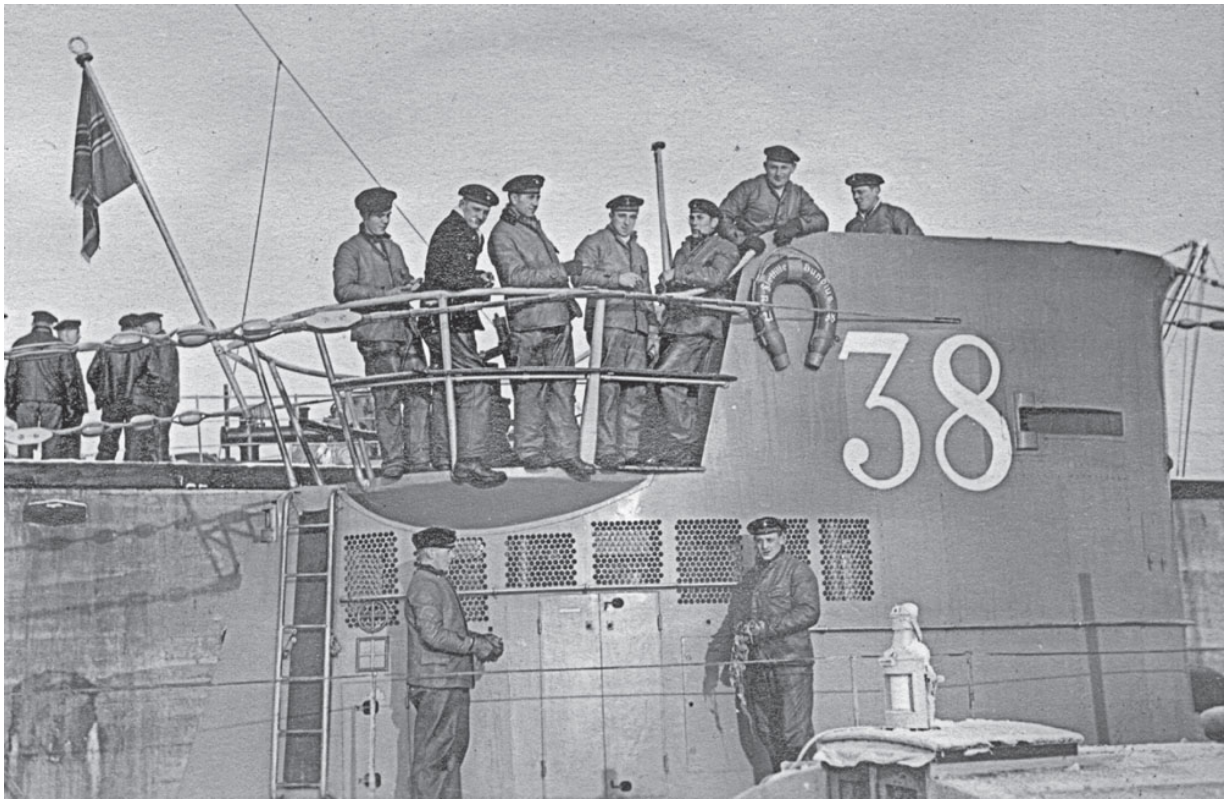
Disturbed by the report from the inspection, the naval C-in-C at Trondheim, Kommandørkaptein Olav Bergersen, contacted the commanding admiral in Oslo for instructions, stating that the German ship in all likelihood was an armed merchant cruiser. During the night, the German consul in Trondheim, Nolda, came on board the ship and at first light the German *Reichsdienstflagge* was hoisted on board *Westerwald* instead of the merchant flag of the day before. Two Norwegian torpedo boats also arrived and the senior officer, Løytnant A Sørensen, came on board the German ship, demanding to carry out an inspection. Grau, supported by the consul, sternly refused this, claiming to be a German state vessel, exempt from inspection. All he wanted was a pilot who could take him southwards. Lieutenant Sørensen feared an attempt at inspection would be met with armed resistance by the German sailors, now openly in uniform and under command. He stood down, left *Westerwald* and reported the matters to his superiors. Consul Nolda went ashore again, telephoning the German Embassy in Oslo and the SKL in Berlin, asking for instructions on behalf of Captain Grau. The answer came quickly: '*Westerwald* is a state ship in service of the Kriegsmarine. Resist all inspection. Demand to proceed unhindered immediately. Embassy in Oslo informs Norwegian government.'

In Oslo, Foreign Minister Koht protested sharply to the newly appointed German minister Curt Bräuer. Armed merchant ships entering Norwegian waters and refusing inspection were not welcome. Bräuer admitted that Grau had been wrong to fly a merchant flag and not inform the Norwegian authorities of his ship's true identity. He added, though, that as *Westerwald* had now admitted to being operated by the Kriegsmarine, she was not obliged to accept an inspection. This Koht accepted, but demanded that as *Westerwald* had already been inside Norwegian territorial water more than twenty-four hours, she should move on immediately. Hence the commanding admiral instructed him to ensure *Westerwald* was escorted

through the Leads as fast as possible. This she was, and in spite of British aircraft circling the ship on occasions, violating Norwegian airspace, she passed out of Norwegian waters and into the Danish Belts in the afternoon of 21 November, arriving in Swinemünde the next day.[39]

On the Line

It had been noted by the SKL that Allied traffic in northern Norway and Arctic Russia increased after the outbreak of the war, bringing home ore and timber. Dönitz was instructed to find out if this was a suitable hunting ground and, on 14 November, Kapitänleutnant Heinrich Liebe took *U38* to sea from Wilhelmshaven, heading north along the Norwegian coast.[40] The weather was appalling and it took a full five days to reach Vestfjorden off Narvik. Here, the storm cleared and Liebe settled down, stalking the entrance to the fjord, observing the traffic. A darkened ship was attacked on the surface at nightfall on the 19th, but the U-boat was sighted and what turned out to be a trawler avoided the torpedoes with ease, whereafter it sped away to the north. Believing the vessel to have been an armed auxiliary, Liebe decided to change position and headed east for the entrance to the Inner Leads further south, inside Landegode Island. This was unquestionably inside Norwegian territorial waters, but Liebe only observed at this stage and concluded that all large ships from Narvik or further north, irrespective of nationality or load, took the route of the Inner Leads. There would be no legal prey for him here. It is clear from the war diary of *U38* that Liebe was seriously tempted to attack on several occasions – not least as there appeared to be no Norwegian patrols in the area.



Type IX boat *U38*. (Author's collection)

On 22 November, *U38* left the Vestfjorden area, continuing further north as per initial orders. Two days later, North Cape was passed and *U38* settled down to patrol between the Varanger Peninsula, the Kola Inlet and the Rybachy Peninsula. There was ample traffic in the area, but all of it small vessels, Norwegian coastal traffic inside the 3-mile limit or Russian ships, not to be targeted. Apart for a few days when the Northern Lights could be seen, it was dark and stormy, with almost continuous fog making observations challenging to say the least. The low temperatures made conditions on the bridge miserable and inside the boat ice started forming on the bulkheads. Only on one occasion did a large vessel appear outside territorial waters. Encouraged, Liebe attacked without ascertaining its nationality or cargo, but to his extreme annoyance the torpedoes malfunctioned and the ship got away. By the end of the month, Dönitz decided enough was enough and signalled Liebe that he should return to the Vestfjord to observe the iron-ore traffic. There is no doubt that Liebe at this stage was discouraged over an unsuccessful patrol and having spent torpedoes with nothing to show in terms of results.[41]

On 6 December *U38* was back at Vestfjorden. Meanwhile, Dönitz had considered the matter and, as Vestfjorden is wide and long, had obtained permission from the SKL to allow *U38* to go *inside* the fjord. Norwegian territory was conveniently defined as 3 miles from the coastline proper. The casualness with which this appears to have been decided is noteworthy. Dönitz and the SKL deliberately chose to interpret ‘Norwegian waters’ in the strictest possible sense, in spite of knowing that the Norwegian government saw things differently and that *U38* would, literally, be operating on the line.[42] In fact, Dönitz also asked the SKL to approve his allowing Liebe to attack any darkened ship in Vestfjorden without warning as these ‘most likely would be British and armed’. This, the SKL denied, as the risk of a darkened ships being German was too high.[43]

Kapitänleutnant Heinrich Liebe. (Author’s collection)

By midday on the 6th, *U38* was well inside the fjord and by evening, close to land north of Landegode. At 22:46, two torpedoes were fired at a freighter north of Brunvær Island. The ship had lanterns set, but no nationality or company markings visible. One of the torpedoes did not leave its tube; the other vanished in the dark. Frustrated, Liebe surfaced, but could not find the ship in the dark and headed away as he expected the torpedo had been seen and the RNN alerted. By now, he had decided to attack any ship not clearly Norwegian and get as close as possible before firing the remaining torpedoes.

During the night of 6/7 December, two large vessels came within sight, but both had their Norwegian markings illuminated and were left alone. A third ship changed course just as Liebe was getting into position. The daylight hours of the 7th were spent under water and by nightfall *U38* surfaced off Engelvær. On that day, the 4,460-ton British freighter *Thomas Walton* was inbound in ballast from Port Talbot to Narvik for iron ore. Shortly after nightfall, she was nearing the mouth of Vestfjorden. According to Master Percy Townsend, *Thomas Walton* was unquestionably inside Norwegian territorial waters.[44] *U38* was on the surface and Liebe saw one light in the mast and two dimmed navigation lights, but no other markings. Finally he had a legitimate target in what he believed to be a legitimate position. Two torpedoes were fired from 875 yards. One hit just forward of the bridge and *Thomas Walton* sank in ten minutes. Eleven men went down with the ship and two died in the lifeboat. The remainder of the crew was rescued by Norwegian fishing vessels and taken to Bodø.

The 1,860-ton German freighter *Sebu* also laid by, taking part in the rescue mission. Liebe, still on the surface, observed the rescue efforts and found the stopped freighter a tempting target. Not recognising her as German, he fired one torpedo from 650 yards. Fortunately for him, this was another *Versager*, exploding at the end of its run.[45] Liebe later complained that the presence of German ships in the Norwegian Leads complicated his

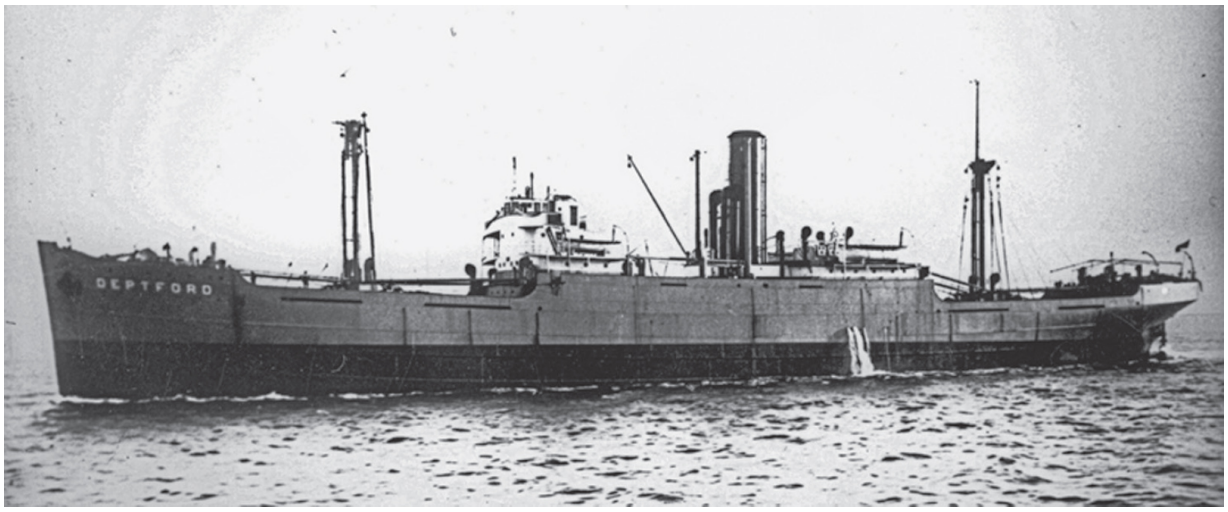
task severely and advised that they should carry some sort of light arrangement, identifying them as friendly.

The sinking of *Thomas Walton* and the explosion of the torpedo missing *Sebu* created significant activity by the RNN, including aircraft searches at dawn the next day. To get out of the way, Liebe withdrew further into Norwegian waters, hiding submerged during the day in one of the many deep fjords. At this point, *U38* had fired eleven torpedoes with only one hit recorded. At least half of the torpedoes fired seem to have been misruns. During the following night, three more torpedoes were fired with no results, while a fourth got stuck in its tube. In addition, the main periscope would not lift, the motor malfunctioning. In the morning of 9 December Liebe gave up and set course for home. One torpedo remained forward, three aft.

Two days later, south of Vikna, a large steamer came into sight. The main periscope was still not working, but there was enough light to make the attack on the surface. It would be a shot from aft, at 2,200 yards, but Liebe found it worth a try and one torpedo was fired at 09:19, Norwegian time. The target was the 4,708-ton Greek freighter *Garoufalia*, bound for Kirkenes in ballast to load iron ore for Holland – in other words, a neutral ship in neutral waters. For once the torpedo ran true and it hit squarely on the port side, the freighter settling deep in the water. Both Master Elias Ponticos and the two Norwegian pilots, Albert Engelsen and Peder Korneliussen, held firmly that the ship was well inside territorial waters when hit.[46] Four men on watch in the engine room were killed instantly and four others injured. The survivors, including the two pilots, took to the boats and were picked up by the steamer *Tellus*. No attempt to look after the survivors was made by *U38*. The wreck of *Garoufalia* did not sink until a second torpedo, fired from 330 yards an hour later, broke her in two. Later, Liebe held that he had seen neither the Greek flag, nor the large neutrality markings on the side before he came close, as neither were illuminated and dawn had not fully broken by the time he fired the first torpedo. At 10:17,

when the second torpedo was fired, it was after sunrise and he should have been able to see both from 300 yards' distance.[47]

Liebe's last success on this otherwise tedious mission came on 13 December. Encouraged by his latest achievement, Liebe had *U38* submerged off Svinøy Lighthouse, north of Stadtlandet, one of the few open stretches of the Leads. There were many ships around, but all of them carried Norwegian or other neutral markings. Finally, around midday, a heavily loaded freighter carrying no markings whatsoever appeared on a southerly course. When the contours of what appeared to be a gun could be discerned on the after deck, her fate was sealed. The ship was the 4,034-ton British *Deptford*, coming from Narvik with iron ore. One torpedo was fired from 1,200 yards around 13:00, hitting the freighter just in front of the bridge. Fully loaded, *Deptford* went down in minutes with engines running, her bow blown clean off. Only five men from the crew of thirty-five were rescued. The two Norwegian pilots were also lost. The survivors were picked up by the small freighter *Firda I* and the coastal steamer *Nord-Norge*. The crew of *Firda I*, which was very close to *Deptford*, reported hearing a 'whistling noise' just before the explosion, but had not observed any torpedo tracks.[48] The Norwegian rescuers held that *Deptford* went down less than a mile from shore, well inside Norwegian territory. The KTB of *U38* gives the position as right on the border.[49] Finally satisfied, Liebe set course for home, unaware that he had just created a major diplomatic crisis.[50]



The 4,034-ton British ore freighter *Deptford*. (A Duncan via E Skjold)

From London came a statement claiming that all ships had been torpedoed by German U-boats inside Norwegian territory and that the Norwegian authorities, though not directly to blame, were unable to prevent German warships operating at will. Norwegian investigations could not exclude drifting mines as the causes of the shipwrecks even if circumstantial evidence indicated that all ships had been torpedoed. The commanding admiral also stated that it could not be said with absolute certainty that *Thomas Walton* had been inside the 3-mile limit, whereas *Garoufalia* most likely and *Deptford* definitely had been.

Berlin registered with some satisfaction the Norwegian dismissal of the British accusations and noted there was no unambiguous proof that any of the vessels had actually been torpedoed. Not surprisingly, a statement was issued, claiming no responsibility for any of the sinkings. Norwegian protests via the legation in Berlin to the German Foreign Office against U-boats operating inside Norwegian territory were dismissed.

It appears that all three ships were inside Norwegian territory when they were sunk, or, if not, so close as to make no difference. The important thing, of course, was that the British Cabinet, and the Admiralty, believed that all three ships had been inside Norwegian territory and drew the conclusion that German U-boats were trespassing on Norwegian territory at will. This 'fact' was accepted by most military and political planners and referred to as the 'hole through which U-boats escaped into the Atlantic, existing as long as Norwegian Territorial Waters are respected by us and not by the Germans'. Except for *U38* however, there is no evidence – then or now – that this was the case. If nothing else, using Norwegian waters to and from the Atlantic would have meant a major detour, reducing operational days west of Britain significantly. And, as British efficiency in blocking the Fair Isle Channel was limited, there was no need to take this measure.[51]

Lack of Alternatives

After Poland had fallen, both Britain and France – especially France – wished to keep Hitler away from the Western Front. Two concepts existed in France to keep the war away from its borders: the 'blood of others' and the '*guerre ailleurs*' ('war elsewhere'). Even if they felt relatively safe behind the Maginot Line, French public, military and politicians all wished to keep the Germans busy elsewhere and pushed for alternative theatres of operations. General Gamelin in particular took these concepts seriously.

The Finnish success in stalling the Russian invaders created the prospect of a diversionary operation outside French soil and at a low cost. On 19 December, the French delegation to the Supreme War Council in Paris proposed landing an expeditionary force in northern Norway. Officially it would be to help Finland but it would also secure control of the Swedish ore deposits as well as the export facilities in Narvik and Luleå. Daladier urged that depriving Germany of the iron ore might break its resistance, while failing to act would mean a prolongation of the war. Chamberlain and Halifax were not so sure, though, and the meeting adjourned with no more than a promise to consider the issue.

A few days later, on the 22nd, the French proposal was discussed with mixed enthusiasm in the War Cabinet. Chamberlain listened to the discussion and concluded that Oslo and Stockholm should be informed that they could count on Allied help if they undertook to assist Finland and allowed Allied warships to interrupt the German ore traffic. It was an offer that Chamberlain was confident would be outright dismissed and thus preclude any opportunity to act. Meanwhile, CoS was authorised to initiate the planning of a landing of Allied forces at Narvik to assist Finland and avert a German occupation of southern Norway. Although neither Chamberlain nor Halifax realised it at the time, wheels had been set in motion that would eventually get out of control. Alexander Cadogan, permanent under-secretary at the Foreign Office, entered in his diary:

I attended Cabinet at 11 for discussion of question of our intervention in Scandinavia. Agreed to make representations as suggested by French, to Norway and Sweden, but decided we might go further and 'switch the war into Scandinavia', i.e. offer to assist in protecting the Swedish iron-mines – which meant protecting them also against Germany, i.e. put a stranglehold on supplies to Germany. This might be a vital point in conduct of war, but it might be difficult to do without being a bit high-handed.

The following week, the War Cabinet discussed Scandinavia again and differences of opinion emerged about what had actually been decided on the 22nd and how to proceed. Chamberlain held that he had agreed to a verbal communication with the Norwegian and Swedish governments to offer help and warn that if the sinking of British ships inside Norwegian territorial waters did not stop, Britain would have to consider halting all German traffic through the Leads. Churchill did not contest this, but held that the decision the previous week had been aimed at halting the entire ore export to Germany, and not only from Narvik. CoS agreed and Churchill said that as the Germans would act as soon as anybody interfered with the ore traffic, one would have to be prepared for the 'major scheme', including Allied troops in Lapland.

In the end, the War Cabinet agreed to prepare for naval actions in Norwegian territorial waters – interceptions, but no mine-laying. Oslo and Stockholm would be informed that Britain and France were prepared to help them against German interference should they decide to assist Finland. Later, they would be further informed in general terms that Allied warships could be sent into Norwegian waters to intercept German vessels in retaliation for the sinking of the three ships in December, but nothing specific would be said about the iron ore traffic. No action would be initiated until the reactions of the Scandinavian governments to the step-wise approach had been gauged. The ongoing trade negotiations with Norway regarding shipping, metals and aluminium were critical and should not be interrupted.

The Norwegian minister to Britain, Erik Colban, on the steps of the British Foreign Office. (Scanpix sx2473bf)

The Swedish and Norwegian ministers in London were called to the Foreign Office and given identical memorandums informing them that the British government and the French government were disposed to give assistance to Finland and were at present assessing how this could be done in the most efficient manner. Permission for the transit of equipment and 'technicians' was requested, in return for which the Allies would be willing to discuss protection against German retaliation. The notes were immediately forwarded to Stockholm and Oslo. The answer from Oslo was swift and explicit: Norway would be very pleased to assist in any aid to Finland, including transit of material which did not jeopardise the neutrality. The Swedish answer, a few days later, was similar.[52]

Unperturbed, CoS reported to the War Cabinet on 31 December that initial plans were ready and, provided the interruption of the Lapland ore supply really would affect Germany adversely, they were now prepared to recommend intervention in Scandinavia, in spite of earlier reservations. The plans were presented to the War Cabinet and its advisers in a meeting on 2 January. The significance of the Swedish iron ore for the long-term German ability to wage war was generally agreed. There was little doubt that severing the supplies through Narvik would provoke an aggressive response from Berlin and if Germany should attack southern Norway in retaliation, this would tie up significant forces and drive Scandinavia firmly onto the Allied side. The meeting ended without a decision on any action, but the ministers agreed that plans for landings in Norway should be completed in parallel with the plans for Finland. The delivery of the second, stronger memorandum to the Norwegian and Swedish governments was also agreed, provided the French concurred. Paris, as expected, gave their immediate approval.[53]

The second memorandum was delivered on Saturday 6 January, when Lord Halifax called the Norwegian minister in London, Erik Colban, to his office, expressing dire concern by His Majesty's government over 'the

recent flagrant violation of Norwegian territorial waters by German naval forces.' The British government, Halifax said, would in the near future be obliged to take 'appropriate dispositions to prevent the use of Norwegian territorial waters by German ships', if necessary by operating inside those waters.

The Norwegian government was taken aback by Halifax's memorandum. 'It was the most serious scare I had had so far and I really felt the war impending,' Koht wrote, 'Not for a second did I doubt that that if the British carried out their threats the Germans would turn their war machine against Norway.'[54] The Norwegian reply took the form of a private letter from King Haakon to his nephew King George VI on 9 January. The letter, undoubtedly endorsed by the Norwegian government, emphasised the alarm at the plans 'for making Norwegian territorial waters a basis for British naval action' and 'appealed to [His Britannic Majesty] to prevent such steps', which could endanger Norway's sovereignty. A somewhat embarrassed Chamberlain stood down and decided to abandon any operations against the Narvik traffic for the time being. The Scandinavian governments were not to be informed of this decision, though, even if Laurence Collier of the Foreign Office sourly remarked to Colban a little later: 'you have won – so far.'[55] There is little doubt that the strong reactions from Norway and Sweden surprised the War Cabinet and, at least for a while, turned Chamberlain and Halifax away from the idea of aggression in Scandinavia. Churchill was embittered, even if the threat of naval action was to be maintained. General Ironside quietly ensured the preparations for a Scandinavian venture continued unfalteringly.

Probably to avoid being seen as utterly negative and inactive, Chamberlain somewhat surprisingly advocated an expedition to Finland to be considered in the meeting of the Supreme War Council in Paris on 5 February. He urged, though, that in their determination to help Finland the Allies must not lose sight of their principal aim, the defeat of Germany. The

ideal operation would therefore be one which, proceeding from Norwegian ports, combined assistance to Finland with control of the Lapland ore fields. Daladier seized the opportunity and it was on that day agreed to set up an Anglo-French expeditionary force of three to four divisions, allegedly to help Finland, but first and foremost to secure the Swedish mines in Lapland. A secondary but important long-term goal would be to secure control of the Norwegian coast, from where offensive operations against Germany could be organised. It is difficult not to conclude that from a lack of determined alternatives, the British War Cabinet had been driven into a situation they did not want to be in.[56]

In Germany, Admiral Raeder had not forgotten the issue of Norway since his failed attempts to put it on the agenda in October. On 25 November, he told the SKL that he feared British landings on the Norwegian coast to create a diversion in the event of a German attack on France and the Low Countries. Hence, Germany would have to consider an intervention in Norway herself. Two days later, on 27 November and again on 8 December, there were discussions with Hitler regarding the merchant war against Britain. On both occasions, Raeder brought up the issue of an intervention in Norway – partly as a necessity to sever the extensive Nordic trade to Britain, partly to prevent a dangerous establishment of Allied bases in southern Norway. It appears from Raeder's later writings that Admiral Carls, C-in-C of Naval Group East, supported him in his views on Norway, but otherwise few in the Kriegsmarine seem to have had many thoughts on the issue at this stage.[57]

During December, the Norwegian National Socialist leader Vidkun Quisling visited Berlin and in meetings with Hitler gave the false impression that the Norwegian government would eagerly accept British landings and allow bases to be established.[58] After the visit, Generalmajor Alfred Jodl, Chief of the Operations Staff at the OKW, was instructed to

start a low-key investigation ‘with the smallest of staffs’ into how Norway could be occupied ‘should it become necessary’ – known as Studie Nord.[59]

The first issue of Studie Nord was completed during the second week of January 1940. The OKW report was brief and its main conclusion was that British control of Norway would be unacceptable and might have to be forestalled by a preventive German occupation. The best solution for the moment would be to maintain Norwegian neutrality while making preparations for a swift reaction, should it become required by a clear British threat. Hitler’s attention was focused in the west, though, and all he allowed was the establishment of a small group, Sonderstab Weserübung, led by Kapitän zur See Theodor Krancke, to continue developing the plans for a pre-emptive operation in Norway. Sonderstab Weserübung assembled in Berlin for the first time on 5 February – the very same day that the Supreme Allied War Council decided to start preparations for an expeditionary force for Narvik.[60]

And then there was *Altmark*.

— 23 —
The Altmark *Incident*

A Sombre Dark Winter[1]

JUST BEFORE DAWN ON 14 February 1940, a large sleek vessel entered Norwegian territorial waters off the Helgeland coast. After rounding the white-painted Halten Lighthouse she took an easterly course across Frohavet before turning south into the Leads. Her freeboard was low fore and aft of the central bridge structure, but both forecastle and stern were built higher, with a single funnel aft, giving her the characteristic shape of a contemporary motor tanker. The dark hull and light grey superstructure gave the ship a sinister look. As the cold light of dawn rose from the snow-clad mountains in the east, the name *Altmark* could be seen in white letters on both sides of the stern.

Kapitän Heinrich Dau had taken *Altmark* to sea from Wilhelmshaven in early August and loaded 9,414 tons of diesel oil in Port Arthur, Texas, while the world was still at peace.[2] In the Atlantic on his way back, the signal '*Steurbord Lampe brennt nicht mehr*' – 'Starboard lantern is out', arrived on 25 August, meaning 'extreme danger of war, keep away from all traffic'. A few days later, instructions followed to head for a point off the Cape Verde Islands to rendezvous with the *Panzerschiff Graf Spee*. En route, Kapitän Dau ordered his ship to be primed in black and grey with a yellow funnel, changing her name to *Sogne* of Oslo. Completing the disguise, a Norwegian flag was hoisted on the stern, while red, white and blue stripes were painted on the sides, as was the word 'NORGE' on the bridge.

Trosschiff *Altmark*. (Author’s collection)

Altmark met up with *Graf Spee* in the morning of 1 September, just as the German troops marched into Poland. During the day, two 20-mm A/A machine guns were transferred from *Graf Spee* together with twenty naval men, two wireless operators, a purser officer to handle the stores and a prize officer. Thus *Altmark* had a crew of 133 men, all told. The two ships sailed into the South Atlantic while Europe went to war. After a while, *Graf Spee* took off to do her business as a raider while *Altmark* vanished into the southern vastness, constantly on the alert to avoid being sighted. They met again on 14 and 28 October and 6 December. Each time, the *Panzerschiff* was fuelled and resupplied. As *Graf Spee* mounted her score, captured seamen were transferred to *Altmark* when they met. This had not been planned for at all and came as a challenge to Kapitän Dau. Storerooms had to be changed to cells, some of the crew had to be assigned to guard duty, and water and food had to be shared between far more men than expected.[3]

Second Engineer Herbert Saville of *Newton Beach*, intercepted off Cape Verde on 5 October, was first taken on board *Graf Spee* then transferred to *Altmark*, where he was to spend a total of 135 days:

> [On board *Graf Spee*], we were treated as officers and gentlemen, while on the prison ship we were looked upon as prisoners. […] Though we were not ill-treated on the *Altmark*, we were sleeping on the iron deck with carpets to keep us warm and we were definitely referred to as the prisoners. I think the worst thing we had to suffer was the monotony and the mental torture of not knowing what was going to happen. Our exercise on the ship was very limited. We were only allowed three-quarters of an hour every 48 hours, and often not that. Very rarely did we see the light of the day and often were not allowed to wash for days.[4]

Improvised prisoners' accommodation on board *Altmark*. (Author's collection)

The accounts of the prisoners from *Altmark* are fairly positive shortly after they had been rescued. Treatment had been fair, without direct mistreatment, and boredom and inactivity seemed to have been the greatest tests, as well as a scarcity of tobacco. Later, the stories became more nuanced and in particular Kapitän Dau and his prison officer, Sub-Lieutenant Schmidt-Burchardt, were described as 'brutal' and 'unfriendly'. The food was criticised by some and the lack of sanitary rooms and washing facilities was awkward, but *Altmark* was not designed to hold prisoners and everything related to them had to be improvised.[5] Most accounts hold the original crew of *Altmark* as far more amenable than those transferred from *Graf Spee* and some point to considerable friction between the two groups.[6]

On 19 December, when the news of the battle of River Plate and Langsdorff's scuttling of *Graf Spee* off Montevideo reached *Altmark*, almost 300 men were locked away in the hull of the tanker. Most masters and senior officers of the sunken ships had been kept on board *Graf Spee* and were eventually released in Uruguay. When interrogated by British Navy officers, they revealed the existence of the supply ship and the prisoners on board her, and a wide-ranging hunt was initiated.[7] Few had actually seen *Altmark*, though, and there was uncertainty about her appearance and whether she was armed or not.

Informed by radio from Berlin that the Royal Navy was searching for him, Dau kept the Norwegian identity of *Altmark*, but changed name to *Haugesund*. Later still, she appeared as *Chirripo*, flying an American flag. Dau remained far south-west of Cape Town for several weeks, hoping the hunt would cool down. At least once, British ships were sighted in the horizon, but *Altmark* slipped away at full speed without being recognised. During January fresh water started to run low and on the 24th Dau decided to make a bid for home. Eluding the Northern Patrol, *Altmark* passed south of Iceland on 12 February and two days later entered Norwegian waters.

The two machine guns transferred from *Graf Spee* had been stowed away below deck. She was flying the official German *Reichsdienstflagge*, a large red-and-white flag with a black swastika in the centre and a golden eagle in the upper corner, indicating a non-naval vessel in official service.[8]

During the night, before entering Norwegian territory, Kapitän Dau sent a lengthy signal to the SKL, informing that all was well on board and that he expected to be home in a few days. It was also added that she had '22(?) British, 67 Indian and 8 Negro prisoners on board, all healthy'.[9] This was the first news from *Altmark* in months and it was greeted with enthusiasm in Berlin. At the German Embassy in Oslo, Minister Bräuer and Naval Attaché Korvettenkapitän Richard Schreiber had been notified some weeks earlier that *Altmark* was to be expected. Now, at 11:30 on 14 February, they received an encrypted telephone message with information that *Altmark* had entered Norwegian waters and that they should ensure that Norwegian naval authorities gave her a safe passage through the Leads, including pilots as needed.[10]

The sixty-five-year-old Kapitän Dau was undoubtedly weary after the long, perilous journey. Radio messages from Germany warned repeatedly that the Royal Navy used vast resources hunting him, but when he reached Norwegian territorial waters, he must have thought the worst was over. Even if Norwegian authorities were aware of the nature of his ship, he should be allowed to proceed down the Leads and slip across the Skagerrak during the night of 15/16 February when the moon would be down early, giving ample hours of darkness to reach shelter in Danish waters, behind the German minefields. Dau knew there would be British consuls in most Norwegian ports and *Altmark* would undoubtedly be observed and reported to London within hours. He had less belief in the British ability to react quickly to the sighting reports, though, and if he could reach Skagerrak within thirty-six hours, he reckoned there would be no immediate danger.[11]

Altmark heading north near Iceland in February 1940. (Peter Behmüller)

The prisoners, no longer permitted to come up for daily exercises, knew they were under land as one sailor had been allowed briefly on deck to empty a washing bucket and guessed correctly it must be Norway. Able Seaman Thomas Foley, a prisoner from *Doric Star*, wrote:

> One of the German guards burst into our room, dashed up to the porthole and clamped it shut, then fixed some iron bars across it, so that we could not see anything. Then he dashed off again and later we heard that the Germans had hung a piece of canvas in front of the entrance. We were virtually buried in the ship's bottom. We were sick with excitement. And we were almost physically sick as now the porthole and the entrance were completely blocked up we did not get any air at all, and the atmosphere of our prison became more stifling every minute. We knew we could not bear it for long, and several of the boys became ill. We existed like this for a whole day and night; vainly complaining to the guard.[12]

The Linnesøy coast guard station at Fosen sighted *Altmark* at 03:40 on 14 February and sent a standard report to Trøndelag Sea Defence Sector in Trondheim. From there, the report was forwarded to Lieutenant Franz Münster of the torpedo boat *Trygg* in Kristiansund with orders to meet the vessel and check her credentials. Approaching the German tanker in the afternoon, off the island of Tustna, Lieutenant Münster observed her through his binoculars. In addition to the *Reichsdienstflagge, Altmark* had a smaller white flag with a central swastika in the main mast, but showed no signs of being armed or any other irregularities.[13] Münster, who was not aware of *Altmark*'s true identity, decided to treat the ship as a regular merchantman and, after instructing *Altmark* to stop, the first officer, Fenrik Evju, was sent across for an inspection.

Rear Admiral Carsten Tank-Nielsen, C-in-C of SDD2 in Bergen, had issued a note to his subordinate commanders summarising what was known about *Altmark* and instructing that, if she entered Norwegian territory, he should immediately be informed. For some reason, the admiral's note had not been distributed among the ships in Trøndelag Sea Defence Sector and neither Münster nor Evju realised that they had just intercepted a ship that the Royal Navy had been chasing for almost two months.[14]

Boarding *Altmark* at 14:45, Evju was taken to the bridge and introduced to Kapitän Dau, whom he later remembered as an austere formal sailor in uniform with a characteristic, grey goatee beard. Dau immediately stated that *Altmark* was a 'state ship' belonging to the German Navy and thus not obliged to accept inspection. He added that she was on her way from Port Arthur to Germany with fuel oil, carrying a crew of 133 but no passengers. Dau did not reveal that a good part of the fuel oil from Port Arthur had already been transferred to *Graf Spee* in the South Atlantic. Questioned about armament, Dau answered that the two 20-mm A/A guns carried for defence had been stowed away before entering Norwegian waters. Evju was satisfied with this, believing the ship to be a regular tanker in official service, and following the neutrality regulations, saw no reason to request a more thorough check. When he commented that it had taken an awfully long time to get from Port Arthur to Norway and that the log book, which he had been allowed to study upon request, showed positions in the South Atlantic, a prickly Dau answered that the ship belonged to the German Navy and the Norwegian officer 'should not have seen that'. Fenrik Evju sensed he was on difficult ground and let the matter drop. He was shown around the bridge, map room and radio room, noted the visitation in *Altmark*'s log, and went back to *Trygg* to report after handing Dau a copy of the neutrality regulations in German, underlining the ban on the use of radio while in Norwegian waters.

The prisoners guessed from the stopping of the engines that somebody had come on board. Able Seaman Foley continued:

> The ship stopped. There was the sound of tremendous bustle from the top deck. We guessed the ship was being searched. Now or never! Unless we succeeded in attracting the attention of the examiners, we would be taken to Germany. […] Gathering all the strength we had left we started to make the most deafening din we could manage, kicking the door, stamping our feet and whistling. […] But it was all in vain, no one seemed to have heard us. Was it possible that the Norwegians really did not hear us or was it that they did not want to?[15]

The Germans were prepared and, once the commotion began, steam-winches on deck were started up with a comment that it was routine to prevent them from freezing up. This was practice on many ships, and there is no mention whatsoever in Evju's report that he or his men heard or suspected anything suspicious.

Based on Evju's assessment, Lieutenant Münster decided to give *Altmark* permission to continue southward. Although her master had admitted the tanker was in service with the German Navy, no guns were on deck and she appeared to be harmless; in which case the neutrality regulations did not require a full inspection. *Trygg* had a local pilot on board, and on a request from Dau, he was transferred to the German tanker to assist her to Ålesund, where regular pilots could take over. While escorting *Altmark* across the open Hustavika, Münster sent a report of the inspection to SDD2 via Trøndelag Sea Defence Sector, adding that everything appeared in order. With the tanker back inside the Leads again, *Trygg* turned back at 18:00, leaving *Altmark* to continue alone, according to standard procedure.[16]

At this point, the German tanker was observed from a ship coming out of the Leads, heading north. The ship was the British freighter *Helmond* and on its bridge Captain D F Harlock became suspicious:

> The Norwegian Pilot I had onboard had Nazi sentiments. I happened to remark to him that the Russians were not giving Germany much oil, as the *Altmark* was half light. He replied that the ship had been out four months. This remark and the speed with which the *Altmark* was travelling made me suspicious, so next day, Thursday 15th February, on arrival at Muirivik, I took the train to Trondheim and reported the ship to the [British] Naval Control there.[17]

Captain Harlock did not know what ship he had sighted, but the British naval control officer in Trondheim did and immediately sent a telegram to London. For the first time since the outbreak of the war, the whereabouts of *Altmark* was known by the Admiralty. The net was tightening.

Also recognising *Altmark* for what she was once he received Münster's report, Rear Admiral Tank-Nielsen, the C-in-C of 2nd Sea Defence District in Bergen, gave orders for her to be escorted at all times inside Norwegian waters. There was no definition of a 'state ship' in the Norwegian neutrality regulations; a vessel was either a warship or not. Claiming immunity to inspection, Captain Dau would by default declare *Altmark* a warship, in which case she could not pass through the exclusion zone or *krigshavn* around Bergen. Kaptein Nils Simensen of the torpedo boat *Snøgg* was ordered to meet the tanker off Ålesund, where she picked up new pilots, to verify the refusal of inspection and to find out more about the guns *Altmark* carried. An irritated Dau had to accept being boarded again but Simensen, who came on board at 21:30 with the two pilots, found everything to be in order. He asked about the guns and got the same answer as Fenrik Evju: there were two A/A machine guns stowed away in the hull. Simensen was shown around above decks, but no attempts were made to go below. Dau asked about the passing of Bergen *krigshavn* and was (incorrectly) told that he could do so during daylight hours, even if he had not been inspected. Close to midnight, *Altmark* headed southward again, slowly at first to pass some narrows after first light. *Snøgg* followed and, a short while later, the destroyer *Draug* also joined the escort.[18]

Things were still not to Rear Admiral Tank-Nielsen's satisfaction. He was convinced that the only way to keep Norway out of the war was a consistent, uncompromising enforcement of the neutrality without favours to either belligerent and, while *Altmark* was inside the area where he was in charge, the neutrality regulations would be followed to the letter. A signal was sent to *Snøgg* with orders for another visitation the following morning. In particular, Tank-Nielsen wanted precise details of *Altmark*'s armament, her assignment and if there were any naval personnel on board. At 11:15 on the 15th, *Altmark* was signalled from *Snøgg* to lie by again, this time near

the mouth of Sognefjorden, and the first officer, Løytnant Frits Andersen, went on board. Dau kept his frustration in check and answered more or less the same questions as he had been asked before, but in more detail: *Altmark* was going home to Germany with a load of fuel oil, the guns were stowed below deck, and there were no passengers or persons from another country on board. The rather large crew was explained through *Altmark* being used for training, and some of the men, it was acknowledged, belonged to the navy. Since it said so in the log book, Dau admitted having left Port Arthur on 19 August the year before, but would not reveal *Altmark*'s whereabouts since. Lieutenant Andersen left *Altmark* after about half an hour, and the German tanker continued southwards.[19]

Rear Admiral Tank-Nielsen remained uncomfortable with the situation and decided to have a look for himself. Accompanied by his acting chief of staff Kaptein Stamsø, he boarded the destroyer *Garm*, intercepting *Altmark* at 12:30 in Hjeltefjorden north of Bergen – inside the *krigshavn. Snøgg* was called alongside and Kaptein Simensen questioned on his inspections of the tanker. When it became clear that nobody had been below deck and that it was only Dau's word that she was not carrying any concealed guns or prisoners, Admiral Tank-Nielsen promptly ordered Stamsø and Simensen on board *Altmark* again.

Right, Rear Admiral Carsten Tank-Nielsen, C-in-C of SDD2 in Bergen. *Left*, Crown Prince Olav, who made a tour of inspection to Bergen in 1938. (F Løvaas collection)

This time, a furious Kapitän Dau protested bitterly to the Norwegian officers. It was the fourth time he had been stopped, and every delay increased the chances of interception by the Royal Navy. He had to pass Bergen as soon as possible should he have any chance of crossing the Skagerrak as planned.[20] Kaptein Stamsø explained that *Altmark* was now some 8 miles inside Bergen *krigshavn* and before she could proceed, every room of the ship would have to be inspected. Horrified, Dau explained that this would not be possible. *Altmark* belonged to the German Navy and had equipment on board that the Norwegian officers could not be allowed to see. As a 'state ship' inspection was denied 'by order of the German government'. Stamsø replied that if this was the case, it would be impossible for *Altmark* to continue. Dau would have to turn back, leave the *krigshavn* and take his ship outside Bergen. The boundary of the exclusion zone extended to the territorial limit, and *Altmark* would have to pass into international waters and proceed southward just outside the boundary. Defeated, Dau accepted this, provided he was allowed to wait until dusk before heading outside. This was agreed and the matter seemed settled, even if the Norwegian pilots refused to stay on board if the tanker was to go outside territorial waters. Maps were produced and the boundaries to the *krigshavn* pointed out to Dau as well as the best routes around, to avoid further misunderstandings.[21]

After studying the maps for a while, Dau excused himself and left the bridge, allegedly to talk to the pilots. Instead, he went to the radio room and ordered a telegram to be sent via the nearest coastal radio station to the German Embassy in Oslo, complaining about the treatment the Norwegian Navy was giving him. *Garm* intercepted the message and Stamsø was hailed with instructions to give the German master a reprimand for using his radio inside Norwegian waters. Dau meekly excused himself, saying he 'did not realise he was still inside the restricted area'. After some further clarifications, Stamsø and Simensen returned to *Garm* to report.[22]

In the meantime, the prisoners, who realised that Norwegians were on board again, started a riot, using empty shrapnel boxes as battering rams. Again, the Germans started the winches, beating back the rebels with steel bars and jets of icy water. This time, though, the signalling and commotion was heard by the Norwegians and Kaptein Stamsø reported to Tank-Nielsen that there with certainty were more than just the crew on board.[23] The prisoners, some of whom had been on board for nearly four months, were desperate and understandably not happy with the Norwegian Navy, which they could see departing in spite of their signals and noise-making. The Norwegian officers needed a decision from their government before they were able to initiate any direct actions other than forcing the tanker outside Bergen *krigshavn*.

With prisoners on board *Altmark*, Admiral Tank-Nielsen concluded categorically that *Altmark* could not pass through the *krigshavn* but would have to go outside, as already agreed. The decision was passed to *Altmark*, from which Kapitän Dau shortly after hailed *Garm*, asking if it would be possible to have a telegram brought to shore and sent to his embassy over the public network. The answer was that if the master had something he wished to discuss, he was welcome on board the destroyer. Dau, more frustrated than ever, came across in his whaler. Some politeness was exchanged between the two officers, after which Dau protested at the delays imposed on his ship. Tank-Nielsen explained once again that a ‘state ship’ was not recognised either by the Hague Convention or the Norwegian neutrality regulations and unless Dau allowed proper inspection, including below deck, she could not pass Bergen *krigshavn*. Some more civility was exchanged between the two officers before the telegram was handed over and Dau returned to his own ship.[24] The telegram, which of course was read by the Norwegian officers, had a similar content to the one Dau had attempted to send from *Altmark* earlier. He complained about the inspections and informed the embassy that as he had refused inspection, he

had been forced to pass outside Bergen and would not be able to cross the Skagerrak as planned. *Altmark* headed north again to wait for darkness in Hjeltefjorden, accompanied by the minelayer *Olav Tryggvason*, which had arrived on the scene and been ordered to take charge of the escort.[25]

Leaving the Inner Leads, going around Bergen *krigshavn, Altmark* would have to proceed down the coast, very close to and partly outside the territorial limit for about 20 miles. These waters contain many treacherous shallows and depending on how close to these Dau would be willing to steer in the darkness would decide how exposed to British interception he would come. Tank-Nielsen and Stamsø believed that one of two things could happen. With luck, *Altmark* would be intercepted by British warships, as *City of Flint* had very nearly been in November. If so, the prisoners would be released and *Altmark* would be out of the way. A protest would have to be made to the British if they had been inside the territorial limit but the potential for conflict seemed low. If nothing happened, *Altmark* would return inside the Leads south of Bergen the next day. By then, however, the government and Foreign Office would have had time to consider the right way of reacting to prisoners being held on board the German tanker. Kaptein Sigurd Årstad, one of Admiral Tank-Nielsen's staff officers, outlined a third alternative in a letter to his father:

> The ship would probably have been attacked [by the British] outside Norwegian territorial waters, and would probably have fled inside again. Then we could have interned it and freed the prisoners, without anybody saying that Norway had not followed international law.[26]

Heading back to Bergen in the afternoon, Tank-Nielsen sent a preliminary signal to the Admiral Staff and commanding admiral from *Garm* informing them that the master of *Altmark* had refused inspection and consequently been ordered outside Bergen *krigshavn*. He added that he believed *Altmark* 'most likely' had prisoners on board.[27] A more detailed report for the Admiral Staff was composed by Kaptein Stamsø on the way back, including information that several of the men in *Garm* and *Snøgg* had

seen and heard SOS signals from the foreship, in spite of German attempts to stop it, ascertaining that there were prisoners on board. The report was submitted as soon as *Garm* had docked at the naval base in Bergen.

In Oslo, the first report of *Altmark* having entered Norwegian waters, reached Admiral Diesen by telephone in the evening of the 14th, after the first inspection. During the next day, he was regularly updated and forwarded the information he received to Under-Secretary of State Jens Bull at the Foreign Office by telephone. Bull expressed concern that a different procedure was followed now than was the case with *Westerwald* a few months earlier. Diesen answered that in his opinion it had been 'an error of judgement'. *Altmark* was a warship and it would be best 'to get rid of her as soon as possible' even if this meant allowing her to pass Bergen *krigshavn*. Bull agreed and when he shortly after informed Foreign Minister Koht by telephone, the latter had no additional comments.[28]

Having spoken to Bull, Admiral Diesen decided to overrule Admiral Tank-Nielsen and sent a telegram to SDD2 at 17:30. 'Let the vessel pass through. It is a state-ship. Escort.'[29] Contrary to Admiral Tank-Nielsen, Diesen was a careful, political officer. He was conscious that the Navy should not cause problems for the government and feared British warships intercepting *Altmark* west of Bergen would lead to severe diplomatic problems.[30]

Coming back to his office at Marineholmen in Bergen, Rear Admiral Tank-Nielsen found the telegram from his superior and promptly called him at 18:00 with a protest, claiming this would be against the Norwegian Neutrality Regulations. Diesen maintained his order and stated he would take the full responsibility. He also criticised Tank-Nielsen strongly for having left his office and gone to sea and for not having allowed *Altmark* to pass Bergen *krigshavn* straight away.[31] At this stage, Diesen knew from his report that Tank-Nielsen believed there were prisoners onboard *Altmark*. He had not yet received Kaptein Stamsø's detailed report but stated later that if

he had, it would not have changed his decision.[32] Tank-Nielsen and Stamsø discussed the instructions and shared their frustrations in the admiral's office, but could do little other than signal *Snøgg* and *Olav Tryggvason* in Hjeltefjorden with orders to escort *Altmark* past Bergen as soon as possible. Rear Admiral Tank-Nielsen did not leave any personal notes, but one must assume he was not very pleased with his commanding officer.

Later in the evening Naval Attaché Schreiber contacted Admiral Diesen, requesting that *Altmark* should be allowed to pass Bergen *krigshavn*. He was informed that such permission had already been granted and expressed 'great satisfaction' over the news that *Altmark* was being escorted southwards. Only in the morning of the next day, Friday 16th, did Diesen inform his superiors in the Ministry of Defence of the events and his decision with a copy to the Foreign Office. By then, *Altmark* had already passed Bergen *krigshavn*.[33]

When he received the new instructions from *Snøgg* just before 19:00, Captain Dau immediately changed course again with a sense of relief. It would be too late to cross Skagerrak the coming night and another day increased the risk of British interception, but at least *Altmark* was still inside the Leads. Speed was set so that Norwegian territorial waters could be departed late next evening east of the Naze for the last dash home across the Skagerrak.[34] The voyage continued uneventfully and at midday on the 16th, the auxiliary *Fireren* took over the escort as the German tanker passed from SDD2 to SDD1 south of Stavanger. The two pilots from Ålesund were replaced by new ones at Kopervik.

Sweep Northward

Following the first sighting report from Captain Harlock in the forenoon of 15 February, at least two more reports arrived at the Admiralty during the day. First, the British naval control service officer in Bergen reported in the afternoon that *Altmark* was rumoured to be near that city and in the

evening, the British naval attaché in Oslo, Rear Admiral Hector Boyes, forwarded information from the French Embassy that *Altmark* had been sighted inside the Leads near Ålesund in the morning.[35] Churchill instructed the Admiralty to let:

> cruiser and destroyers sweep northward during the day up the coast of Norway, not hesitating to arrest *Altmark* in territorial waters should she be found. This ship is violating neutrality in carrying British prisoners of war to Germany. Surely another cruiser or two should be sent to rummage the Skagerrak to-night? The *Altmark* must be regarded as an invaluable trophy.[36]

In the evening of the 15th, a summary of the sighting reports was forwarded to Philip Vian, Captain (D) of the 4th Destroyer Flotilla, at sea on board *Cossack*, accompanied by *Sikh, Nubian, Ivanhoe, Intrepid* and the cruiser *Arethusa*. The flotilla had departed Rosyth earlier in the day, allegedly on an 'ice reconnaissance' in the Skagerrak (Operation DT). The destroyers had embarked boarding parties before sailing, though, and below deck it was common knowledge that they were looking for the 'Nazi prison ship'. The sighting reports carried the addition that they should not hesitate to intercept *Altmark*, even if encountered inside Norwegian territorial waters.[37]

Vian was one of the most outstanding officers of the Royal Navy. As C-in-C of 4th Destroyer Flotilla, he usually had his command on board the flotilla leader *Afridi*. In January, *Afridi* went to the yards and Vian decided that Captain Sherbrook of *Cossack* was due for a break. Once he had departed, Vian moved over to *Cossack* with his staff. By all accounts Vian was a challenging man to serve under. Lieutenant Commander Reginald Whinney had known him since long before the war:

> Vian had always been spare. He was tallish and fair with heavy bushy eyebrows. […] His face never showed much expression – perhaps the hair hid it. PLV was a man who lived on his nerves – and very resilient they must have been. […] He was not, though, a gentle gentleman. […] As a Captain, he was unbelievably rude, hot tempered and frequently needlessly offensive; one had to stand up to him and be right – or make him think so. In action he was quiet, calm and very quick. Anyone who

raised his voice unnecessarily at any time did not do so twice. Otherwise, some distance beneath his ferocious exterior, he could be a man of surprising kindness. In some ways he was a genius.[38]

Tribal-class destroyer *Cossack*, July 1938. (A&J Pavia)

Considering the incoming sighting reports, Vian found it improbable that *Altmark* could have reached beyond Kristiansand. Hence, he spread his ships line-abreast some six miles apart, steering west and north from Lindesnes during the night. At 00:48 on the 16th, a signal from Admiral Forbes made it clear what they were looking for: '*Altmark* your objective. Act accordingly'. At 04:37, a signal from the submarine *Seal* indicated that *Altmark* had not yet passed Skudeneshavn and, after gathering on *Cossack* at daylight on the 16th, the force remained in the vicinity of the Norwegian coast to the south of *Seal*'s patrol area. During the forenoon, several vessels were stopped and searched, also inside Norwegian territorial waters, but there was no sign of the elusive *Altmark*.

At midday, a signal from the Admiralty reported *Altmark* in Swedish waters, at the head of the Kattegat. This caused some confusion until it was discovered that the decoding of the signal was erroneous and the name initially read as 'Veaden Rev', should probably be 'Jaederens Rev', an old-fashioned spelling of Jærens Rev, the shallows south of Stavanger. During the next couple of hours, a number of sighting reports were received, with positions differing by up to 25 miles. One problem was that nobody knew what *Altmark* looked like. The only photo available was one from the *Illustrated London News*, but there were two ships in the photo and the caption did not indicate which was the German tanker. Eventually, Vian decided to split his force. *Arethusa* with *Intrepid* and *Ivanhoe* should cover the area off Egersund while *Cossack, Nubian* and *Sikh* would make a sweep south towards Lista. Tension was running high, and fire was opened on what was thought to be a German reconnaissance aircraft but turned out to be a Hudson from Coastal Command, sending off the wrong recognition signals.[39]

16 February 1940: *Altmark* has been found and is approached by *Intrepid* inside Norwegian territorial waters. (D Briggs collection)

In the early afternoon of the 16th, *Altmark* and *Fireren* were just off Obrestad Lighthouse south of Stavanger when they were sighted by a battle flight of three Hudsons. The aircraft from 220 Squadron at Thornaby were flying northward in a loose line-abreast approaching Stavanger, when two ships were observed: one of them a small auxiliary, the other a large tanker. The aircraft passed inside Norwegian territory, circling the larger ship for a proper identification. The name *Altmark* was painted in white on both sides aft, below the swastika flag, and there was no doubt that they had found the tanker.[40] *Altmark*'s position was reported to the Admiralty at 12:55 and forwarded to *Arethusa* and *Cossack* at 13:18.[41] *Fireren* had no A/A guns and Kaptein Sigurd Lura could only hoist a protest signal against the intruding aircraft.[42] *Cossack* and her group were far south of the reported position, but *Arethusa, Intrepid* and *Ivanhoe* were close and turned to investigate. At 13:50 (BrT), Gunnery Officer Lieutenant Roberts reported from *Arethusa*'s director control tower that he could make out a vessel close to the Norwegian coast and believed her to be *Altmark*.[43]

Around 16:00 Norwegian time, the torpedo boat *Skarv* commanded by Løytnant Herman Hansen replaced *Fireren* as escort to *Altmark* as she passed Egersund. Shortly after, three ships came into view from the south-west. They closed at speed and could soon be identified as a British cruiser and two destroyers. Paralleling the tanker's course, just outside the Norwegian territorial limit, *Arethusa* flashed a signal, ordering *Altmark* to 'steer west', out of Norwegian territory. Dau ignored the order and continued hugging the coast. He could not believe that the British would violate Norwegian territory in broad daylight in front of a RNN torpedo boat. Captain Graham of *Arethusa* believed his orders from the Admiralty were clear enough, though. He sent a signal to Vian, confirming he had located the German ship, and ordered *Intrepid* and *Ivanhoe* to intercept and board her while he covered from outside the territorial limit. The two destroyers turned inside Norwegian territorial water at speed, *Ivanhoe*

hoisting the flag signal ‘Steer west’, *Intrepid* flashing ‘Heave to, or we fire’. There was no reaction.

At 16:30, Lieutenant Hansen sent a wireless signal from *Skarv* to his superiors in Kristiansand with information that British naval ships had been sighted. Ten minutes later a supplementary signal said they were now inside Norwegian waters, apparently intending to intercept *Altmark*. Hansen steered his nimble torpedo boat towards *Intrepid*, the nearest of the destroyers. Through bold manoeuvring, he managed to keep *Skarv* between *Intrepid* and *Altmark*, protesting at their presence inside Norwegian waters by loudhailer. Commander Roderick Gordon hailed back that *Altmark* was also in Norwegian waters – with prisoners on board. Hansen answered that the German ship had been searched, and no prisoners found. In frustration, Gordon turned 180 degrees and, as expected, the torpedo boat followed. After two miles he turned *Intrepid* back towards *Altmark* again, increasing to 25 knots, leaving *Skarv* behind.

When well away from the Norwegian, Gordon gave the order to fire a warning shot on the tanker. The 4.7-inch shell ricocheted off the water some 220 yards behind the tanker and landed harmlessly inland at Stien near Rekefjord.[44] Two more rounds were fired, and Dau finally lost his nerve. *Altmark* started to slow down. *Intrepid* slowed too, and lowered her whaler with a boarding party on board. Seeing this, Dau ordered speed again, and the whaler could not catch her. *Skarv* had in the meantime caught up with *Intrepid* and Lieutenant Hansen again hailed a protest against the violation of Norwegian territory. Commander Gordon answered that he was under orders to intercept *Altmark* and bring her to England. Hansen repeated his protest, to which Gordon replied: ‘I have my orders.’[45]

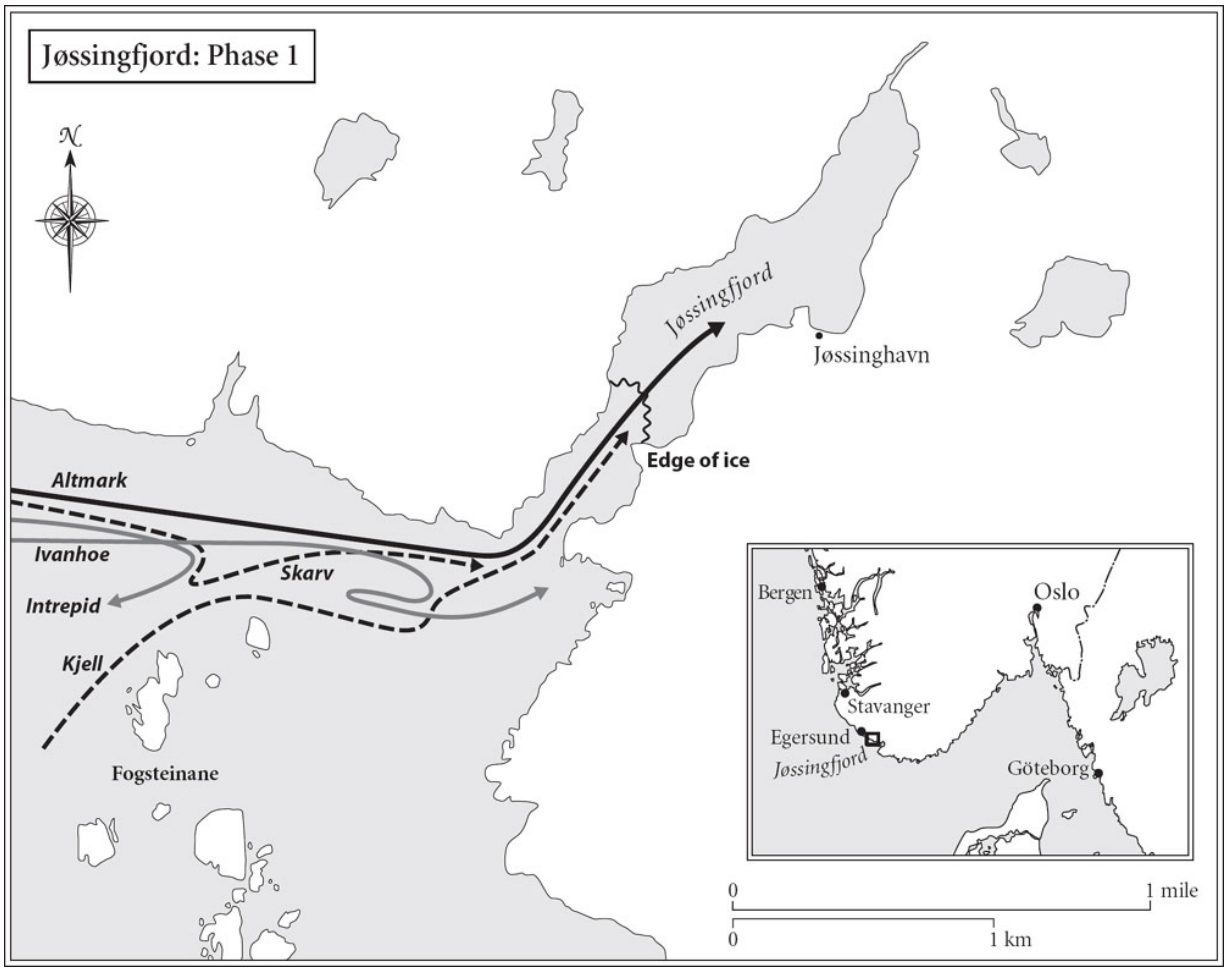
While *Skarv* was busy with *Intrepid*, Commander Philip Hadow took *Ivanhoe* close to the tanker in an attempt to force her out to sea. Advised by the two Norwegian pilots, though, Dau steered *Altmark* inside a small cluster of islands named Fogsteinane, where there was little room to

manoeuvre. Hadow decided it was time to board and tried to manoeuvre close enough to *Altmark*'s starboard side to allow his boarding party, which was standing by, to jump across. Michael Scott, one of the officers of *Ivanhoe*, later wrote:

At one stage, *Ivanhoe* was only yards away from the stern of *Altmark*. Note that there is nobody to be seen, all men are below deck or inside the bridge house. (D Briggs collection)

Standing where I was on the bridge, the *Altmark* presented an unforgettable sight. A ship of some 10,000 tons would, I think, cause comment when not a single soul was to be seen on deck, but in wartime, and especially when a ship is about to be boarded, it seemed to me to be so sinister and unrealistic that I thought there must be some strategy in it, particularly as we had heard that she carried guns. But nothing happened and she proceeded towards the fjord entrance. […] We increased speed and came up quite fast on her starboard quarter.[46]

Just as *Ivanhoe*'s bow started to close on *Altmark*'s quarterdeck, Dau increased speed to about 10 knots and *Altmark* slipped to port, all the time closing the mouth of Jøssingfjord, opening up behind Fogsteinane. The destroyer was sheared off by the tanker's propeller wash, and the chance to board was lost. Orders had been given from *Arethusa* to machine-gun the bridge of *Altmark* if she refused to stop. Two of the men seen on the bridge were identified as Norwegian pilots, though, and Hadow decided not to open fire.[47]



Entering the scene off Jøssingfjord at this stage was the torpedo boat *Kjell*, under the command of Løytnant Finn Halvorsen. Both *Kjell* and *Skarv* were pre-WWI design and, though their torpedoes still demanded respect from the British destroyers, they had no more than two 47-mm and one 76-mm guns between them. Being senior, Halvorsen took command and radioed Hansen for a situation report. Getting this, he hoisted the 'protest' flag and positioned his boat in the way of *Ivanhoe*, which had to veer off the pursuit of *Altmark*. The two warships were at hailing distance and Lieutenant Halvorsen shouted a protest at the intrusion of Norwegian territory across the sea. Surprisingly, Hadow shouted back in German and Halvorsen interrupted him with a 'Please speak English, sir' that caused some amusement on the bridge of the destroyer.[48] Halvorsen's repeated

protests made the two British destroyers slow down, and *Altmark* slipped inside Jøssingfjord, the narrow entrance to which appeared between two small lighthouses.

In Jøssingfjord, the sixteen-year-old Wilhelm Dydland was looking after his boat, which had been landed for the winter. Sometime around 17:00, he heard loud noises from the sea and shortly afterwards a huge vessel came into the fjord at speed. Surprised, he ran out onto the barren sea-cliffs to look. As it passed close by him, a man came out on the bridge wing of the tanker and shouted in Norwegian, asking if the fjord was deep enough to enter.[49] The baffled youngster waved and shouted back that it was all right and watched *Altmark* sweep by into the fjord, making loud noises as she opened a wide swathe in the 2–3-inch-thick ice covering the fjord some hundred yards inside the entrance.[50]

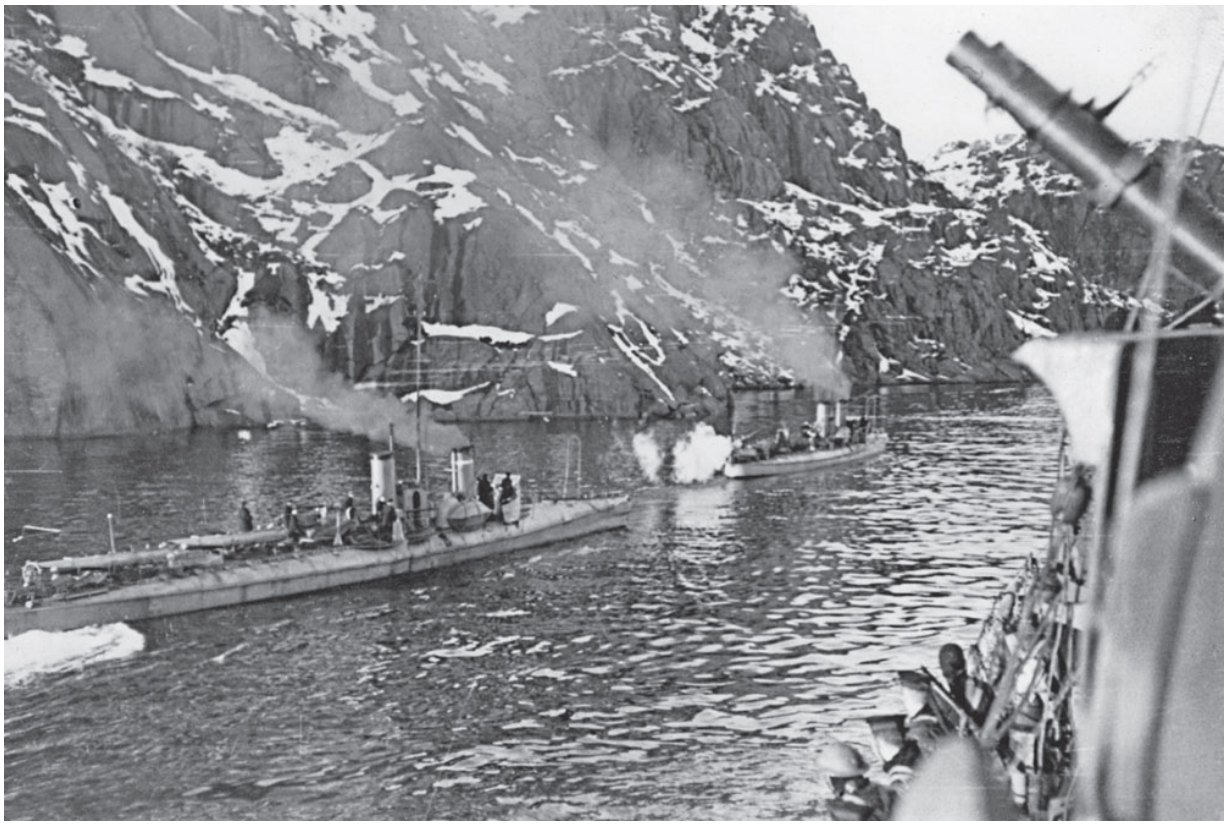
Altmark steering towards the mouth of Jøssingfjord. The edge of the ice can be seen a bit further inside. (D Briggs collection)

At 17:10, as he entered Jøssingfjord, Dau sent a telegram via the nearest coast radio station to the German Embassy in Oslo, advising that he was ‘under land’ and that a British destroyer was attempting to come alongside. *Arethusa* attempted to jam her transmissions at first but then stopped, as it was believed it would be better to intercept the message and perhaps learn the German’s intentions. At 17:55, a second signal was sent from *Altmark* to the embassy, informing that she was safely inside Jøssingfjord, protected by two Norwegian torpedo boats, but with *Intrepid* hovering outside. Later, a third signal requested the embassy to ‘make strong protest against the conduct of the English naval forces’. The German B-Dienst followed the events closely and, besides intercepting most of the British signal traffic, also picked up Dau’s signals to Oslo, forwarding them to the SKL and Group West.[51]

In Berlin, the SKL assessed the situation continuously but, unlike Dau, they had no expectations that the British would respect Norwegian territorial waters. In a signal at 18:12, *Altmark* was ordered to seek shelter in ‘Lister Fjord or the nearest torpedo safe anchorage’. Remembering the Norwegian reactions to *City of Flint* dropping her anchor, though, a modified signal followed only minutes later: ‘Do not anchor, but spend the night in a secure area’. The SKL also considered sending a destroyer force covered by the cruiser *Hipper* and at least one battleship towards Norway, but because of the ice conditions the readiness of the ships was low and they would not be able to take to sea until the next morning, at best. Instead, instructions were sent to Naval Attaché Schreiber in Oslo to contact the Norwegian authorities and make sure they would do their utmost to ensure *Altmark* was safe.

Schreiber contacted the Admiral Staff around 18:45 and was informed that the RNN was aware of the situation and that every step necessary would be taken. Having eventually received the second and third of Dau’s signals (the first was received at Farsund radio in spite of *Arethusa*’s

jamming but never delivered to the embassy), Schreiber telephoned the Admiral Staff again at around 21:50, while Minister Bräuer called Under-Secretary Jens Bull in the Foreign Office, requesting information. Both were told that information was scant at the moment, but the RNN had the situation under control and *Altmark* was safe. Should anything happen during the night, the embassy would be informed.[52]



The Norwegian torpedo boats *Kjell* and *Skarv* positioning themselves between *Altmark* inside the fjord and *Ivanhoe* just outside. (D Briggs collection)

The British naval attaché, Rear Admiral Boyes, on the other hand, was invited over to the Admiral Staff during the evening. Here, the the head of Naval Intelligence, Kaptein Erik Steen, showed him Jøssingfjord on a map and explained the situation as he knew it. It was emphasised that *Altmark* could not escape without eventually leaving Norwegian territory – at which time British ships could intercept her without infringing Norwegian neutrality. If Captain Dau chose to stay in Jøssingfjord, Norwegian authorities would eventually be compelled to 'take care of the prisoners'. Either way, Boyes was asked to confirm that British naval ships would not enter Norwegian waters again, attacking *Altmark*, as the situation was under control.[53] It has not been possible to ascertain if Admiral Boyes actually forwarded this information.

Dead End

Few islands shelter the desolate part of the Norwegian coast known as Dalane from the North Sea. In 1940, the population of the region was very small and, apart from the village of Hauge and its harbour Sogndalstrand, only a few farms and settlements lay scattered among the mountains. From the sea, the area looks uninviting and that February the heavy snow cover went almost down to the sea, adding to the desolation. Jøssingfjord is one of the few places large enough to shelter a ship the size of *Altmark*. Next to the small fishing settlement of Jøssinghavn, there was also a simple deepwater quay with ore-loading facilities near the head of the fjord. The export of titanium ore had been halted by the war and the facilities were not in use at this time.

With *Altmark* entering Jøssingfjord shortly after 17:00, the situation settled for a while. Lieutenant Halvorsen let *Kjell* follow *Altmark* through the opening she made in the ice while *Skarv* laid-by just inside the mouth of the fjord, blocking the entrance. *Ivanhoe* remained just outside, well inside

Norwegian territory, while *Intrepid* pulled back, retrieving her whaler with the unsuccessful boarding party.

Lieutenant Halvorsen wanted to talk to the master of *Altmark*. The ice prevented *Kjell* from coming alongside the tanker, though, and the two captains had to use their loudhailers over the stern of the tanker. Dau told Halvorsen there were around 130 men on board his ship, which had already been inspected by the Norwegian Navy several times, including by 'the admiral in Bergen'. He, Dau held, had given them 'right of passage'.[54] This was confirmed by the pilots, with whom Halvorsen also spoke. Content for the time being, Halvorsen took *Kjell* out of the fjord to hear what the British had to say. Meanwhile, Captain Vian had arrived and *Cossack* was alongside *Ivanhoe* to receive a report from Commander Hadow. *Sikh* and *Nubian* remained offshore with *Intrepid* and *Arethusa* guarding against U-boats.[55]

Having been updated, Vian instructed Paymaster Sub-Lieutenant Geoffrey Craven, who spoke German as well as basic Swedish, to invite the captain of the Norwegian torpedo boat to come on board *Cossack* to try to sort out the mess. Halvorsen accepted and came aboard the destroyer. The twenty-nine-year-old lieutenant, who spoke good English, protested firmly over the violation of Norwegian neutrality and presented his senior British colleague with an English version of the neutrality regulations. Vian answered that there were '400 starving British prisoners' on board *Altmark*, demanding the right to board the German tanker and search for them. Undaunted, Løytnant Halvorsen answered that *Altmark* had been inspected by the RNN and that he had not been informed of any prisoners. Vian suggested British and Norwegian officers should jointly inspect *Altmark* and settle the issue of prisoners once and for all. Halvorsen replied he could not authorise this as the German ship had permission to transit Norwegian waters. He repeated the seriousness of the situation and urged Vian to leave Norwegian territory immediately. The discussion was held 'in a firm but

polite manner', according to Halvorsen in his report to SDD1. Others describe it as somewhat heated at times, the Norwegian lieutenant at one stage threatening to use torpedoes if the British ships did not leave within thirty minutes.[56] Eventually, Vian must have felt it imprudent to board *Altmark* as the situation had developed, and he stood down. Around 18:30, after Halvorsen had left *Cossack* with promises to have *Altmark* searched again, he ordered *Ivanhoe* to follow him outside the territorial limit.

Two 'Most Immediate' signals were dispatched from *Cossack* to the Admiralty and repeated to Commander-in-Chief, Home Fleet. The first at 17:32 (16:32 BrT):

Fiord is dead end. Expect no change from Norwegian gunboat, who is examining *Altmark*. A second gunboat has a torpedo tube trained on me. *Altmark* is apparently being effectively jammed by *Arethusa*. She is painted warship grey.

The second at 18:57 (17:57 BrT):

Commanding Officer of Norwegian gunboat *Kjell* informs me that Norwegian pilots on board *Altmark* report that vessel was examined in Bergen yesterday, 15th February, and authorised to travel south through territorial waters. He said that vessel was unarmed and nothing was known of British prisoners. I have withdrawn outside territorial waters and awaiting your instructions. Have stopped *Arethusa* jamming.[57]

Jøssingfjord shortly after 17:00. *Ivanhoe* has backed off with *Altmark* entering the ice inside Jøssingfjord and the two torpedo boats just outside the edge of the ice. (D Briggs collection)

Dau was in an awkward position, but considered his ship safe as long as he remained inside Jøssingfjord. With the Norwegian torpedo boats between him and the British destroyers the matter had become a political issue, which from now on could be left for Berlin to handle. He had certainly no intention of creating any pretext for British or Norwegian interventions and was content to stay where he was for the moment. *Altmark* was moved as far into the fjord as possible and halted against the ice near the eastern side as darkness started to fall. Anchors were not dropped and the engines were kept running to be able to move at short notice. The two Norwegian pilots went ashore but, of all things, two local customs officers came on board.[58] At the time, nobody seems to have realised that by going into the fjord, *Altmark* had was no longer in an 'innocent passage' of a neutral fairway, but had entered inland waters and hence, changed her legal definition according to the Hague Convention.

Meanwhile, Lieutenant Halvorsen sent *Kjell* to join *Skarv* blocking the entrance to the lane through the ice that the tanker had made, while he himself went ashore in Jøssinghavn. The radios of the Norwegian ships were useless between the high mountains surrounding the fjord and Halvorsen used the only telephone in the settlement, dictating a detailed report to his superiors in Kristiansand. Concluding his report, Halvorsen asked for permission to search *Altmark* again to ascertain whether she had prisoners on board or not. *Fireren*, which had been ordered from Egersund to Jøssingfjord, arrived at around 20:40. Kaptein Lura was senior Norwegian officer on site, but left the contact with *Cossack* to Halvorsen.[59] To maintain communication with Kristiansand, a man was left at the telephone in the house some 30–40 yards away from the Holmekaien pier where *Fireren* moored. He was in shouting contact with the auxiliary, who used a signal lamp to the torpedo boats that lingered further out. Through this primitive but efficient system, naval and political authorities were kept

informed as the situation developed and could give their orders and instructions without much delay.

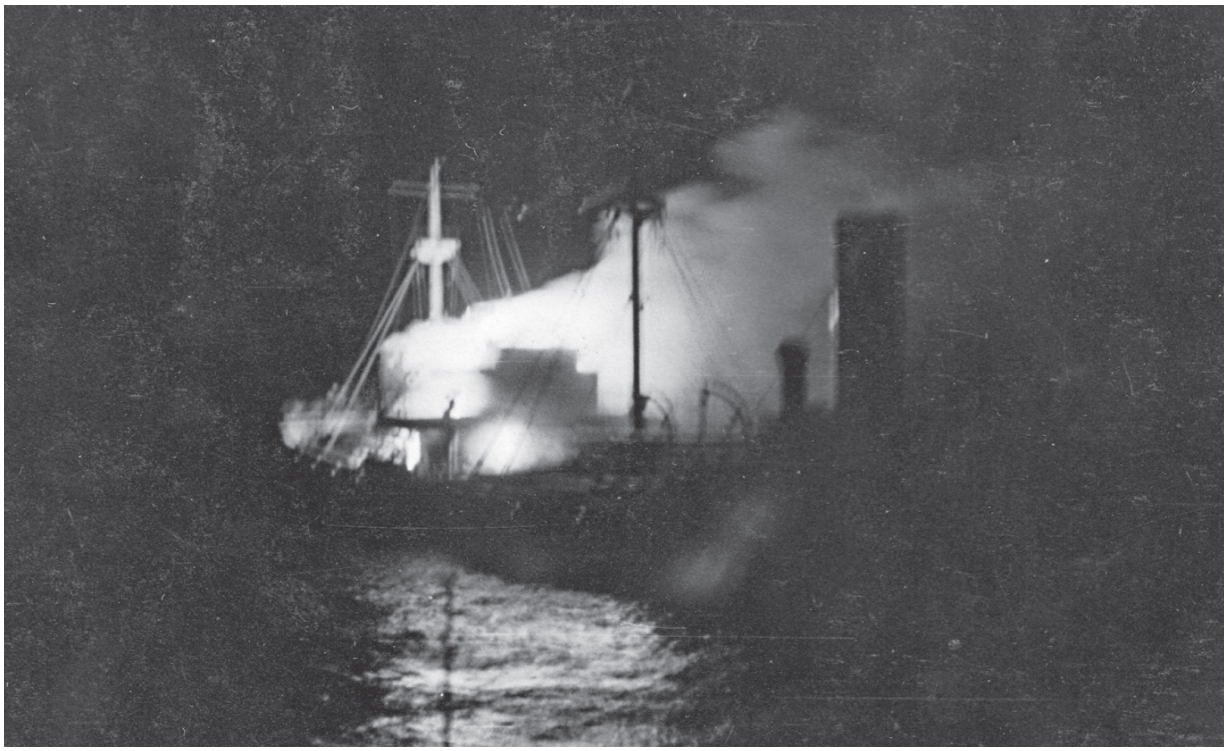
During the evening a reply to Lieutenant Halvorsen's request arrived directly from Rear Admiral Smith-Johannsen of SDD1; *Altmark* was *not* to be inspected again. If, during the night, the British forces made moves to board the German tanker, the torpedo boats should prevent this – if necessary by force. It was believed that moving their boats between *Altmark* and any British destroyer would be adequate, as boarding the tanker across a Norwegian deck would be out of the question. Shortly afterwards the order to use force was recalled by the commanding admiral, allegedly after orders from the Foreign Office. Løytnant Halvorsen had been denied all possibility of resisting the intruders in spite of his successful efforts earlier in the day.[60]

On the night of 15/16 February, the British mine-laying submarine *Seal* had laid a 3-mile long net off the Fogsteinane islands not far from Jøssingfjord.[61] The hope was that *Altmark* would entangle herself in the net and stop or, seeing the net, would venture outside Norwegian territorial waters to be intercepted. Instead, it was the 5,805-ton German ore ship *Baldur* on her way south from Kirkenes that became entangled in the net and started to drift helplessly westward. An aircraft from Coastal Command sighted her, thought she might be *Altmark*, and reported the sighting back to base. *Intrepid* and *Ivanhoe* were ordered to investigate. Michael Scott of *Ivanhoe* wrote:

> It must have been at about 21:30 [BrT] that the First Lieutenant, who was on watch at the time, saw a darkened ship going in a southerly direction. We closed on her, put the searchlights on to her bridge and found once again that it was another ship flying the German flag. She was signalled 'Stop Immediately' and a warning shot was fired across her bows. […] The only reply we got to that was 'What do you want?' flashed to us in English. We then fired another shot and she stopped immediately. Things then happened very swiftly. The upper part of the bridge of the *Baldur* suddenly began to pour forth clouds of smoke which burst into flames. The ship began to settle and we waited

to pick up the survivors. Two lifeboats were seen being lowered, one of which made for the *Intrepid* and the other for the shore with us in pursuit![62]

The German ship was quickly engulfed in flames and, fearing an explosion, Commander Hadow recalled the whaler with a boarding party just launched from *Ivanhoe*, picking up the men from the lifeboat instead. Captain Vian later wrote in his report that as 'the sea was calm and the night moonlit, the two destroyers should have attempted to go alongside and board the freighter straight away to prevent scuttling.'[63] *Baldur* sank during the night.



Baldur burning fiercely, having been scuttled by her crew. (D Briggs collection)

Having withdrawn outside Norwegian territory and sending his reports, Vian settled down to wait. The ice conditions observed in the Skagerrak meant that *Altmark* for the moment could not reach Germany without eventually leaving Norwegian territory. German ships and aircraft could be expected at daylight, but Vian's force was strong and three submarines, *Triad, Seal* and *Orzeł*, were also in the area.[64] The longer *Altmark* stayed in Jøssingfjord, the more likely it was that the Norwegian government could be swayed to accept a thorough inspection of the vessel including British officers, or at least British officials.

In London, Churchill had arrived in the Admiralty War Room with DCNS Rear Admiral Phillips, alerted by the news of *Altmark* being found. He was in no mood for patience or diplomacy and, with Admiral Pound not present, Churchill took matters into his own hands. Having conferred with Foreign Minister Halifax, but without going through Admiral Forbes, who was Vian's superior, Churchill submitted explicit orders to *Cossack* at 17:50 (BrT):

> Unless Norwegian torpedoboat undertakes to convoy *Altmark* to Bergen with a joint Anglo-Norwegian guard on board and a joint escort, you should board *Altmark*, liberate the prisoners and take possession of the ship pending further instructions. If Norwegian torpedoboat interferes, you should warn her to stand off. If she fires upon you, you should not reply unless attack is serious, in which case you should defend yourself using no more force than is necessary and cease fire when she desists. Suggest to Norwegian destroyer that honour is served by submitting to superior force.[65]

Captain Vian must have realised that the signal bore Churchill's mark and that his next few actions would at best be critical for his career. The signal crossed his own request for instructions and was shortly after supplemented by a brief: 'Your 1757/16 received. Prisoners probably hidden onboard. Carry out my 1750/16.'

Vian signalled 'I go alone' to the other ships and ordered Lieutenant Commander Bradwell Turner, *Cossack*'s first officer, to prepare the boarding party. This consisted of forty-five sailors, largely from the cruiser

Aurora, embarked for the occasion as *Cossack* had a number of her crew down with a bout of flu. The men were grouped in four sections; each allocated a part of the German ship to take control of.

It was a cold but clear night as the moon was up, giving a fair visibility. At around 22:45, Vian took *Cossack* back into Norwegian waters east of Fogsteinane. The waters are foul here and the RNN officers wondered at the recklessness of the British captain. On the bridge of *Cossack*, however, the pilot officer, Lieutenant Commander MacLean, had to admit to Vian that he had followed the wrong lights ashore and asked if he could have the searchlights switched on to see where he was. This was done and she made it safely through the straits, but comments on the bridge were that history would show *Cossack* coming in with lights blazing – when in fact she was lost.[66] At 23:12 (22:12 BrT), as *Cossack* entered Jøssingfjord, a third signal from the Admiralty arrived:

> If offer of joint escort and guard to Bergen is not accepted and you have been forced to board, action is to be taken as follows: If no prisoners are found to be onboard, ship is to be brought in as a prize. If no prisoners are found and ship is definitely *Altmark*, Captain and officers are to be brought to England in order that we may ascertain what has been done with prisoners. Ship to be left in fjord.[67]

In general, there is a notable inconsistency among the accounts of the participants in the subsequent events at Jøssingfjord this evening. British, Norwegian and German reports differ widely; more so the longer after the events they have been written. Most parties appear to have had a growing need to justify their actions – or lack thereof. The following is an attempt to piece it together as accurately and objectively as possible from the original sources.

'The Navy's '*ere*'

At first, Lieutenant Halvorsen did not recognise the approaching ship, but when he did, he hailed *Cossack*, requesting her to heave to. Vian obliged

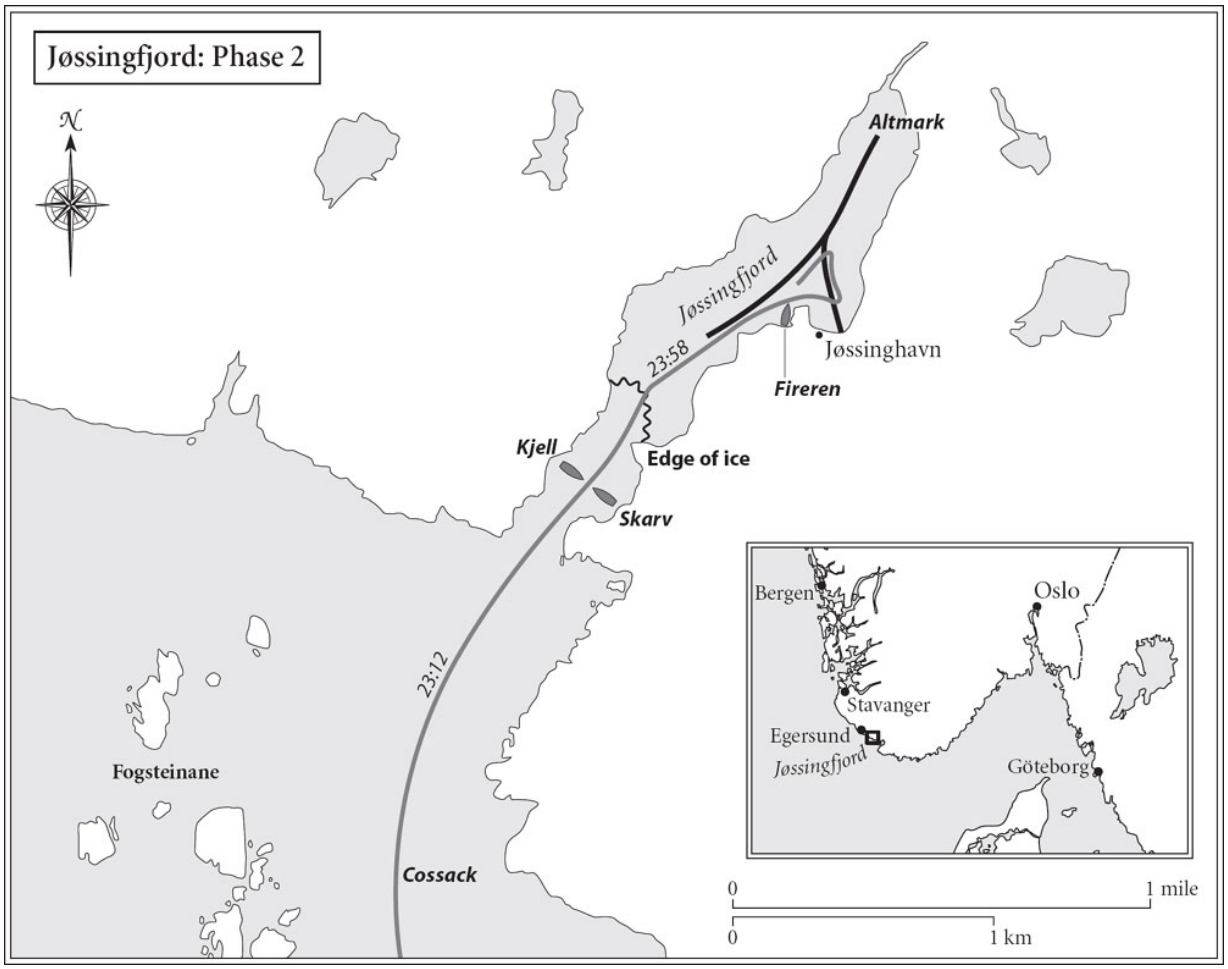
and hailed back that he had orders from the British government to 'liberate the 400 prisoners on board *Altmark*', suggesting a joint Norwegian-British team board her via *Kjell*.[68] Lieutenant Halvorsen answered that this would not be possible based on the instructions he had from his superiors and, anyway, his ship could not manoeuvre in the fjord due to the ice. After some more parleying, Halvorsen reluctantly agreed to come onboard *Cossack* as an observer. Entering the bridge of the destroyer at 23:30, Halvorsen was informed by Vian that he intended to carry out a search of *Altmark* as soon as possible, with or without Norwegian consent. Halvorsen, based on the information available to him, believed that there were no prisoners on board *Altmark* and repeated that the British ship would have to leave Norwegian waters forthwith. The Norwegian lieutenant later held that he asked the British captain: 'If there are no prisoners on board the *Altmark* – what then?' to which Vian answered: 'Well, that will be a mistake from my government's side.' Vian, on the other hand, later claimed that during the subsequent discussions with Halvorsen on the bridge of *Cossack* he repeatedly suggested a joint Norwegian-British escort should take *Altmark* to Bergen for a proper search by Norwegian authorities, as suggested by the Admiralty. Lieutenant Halvorsen, in his report to Commanding Admiral, firmly denied this and in a letter dated 25 January 1954 to the War History Department stated he could 'definitely not recall any such suggestions'.[69]

Kaptein Lura of *Fireren* had his man at the telephone inform Kristiansand Sea Defence Sector that a British destroyer was moving into the fjord in spite of protests. The message was forwarded to Rear Admiral Smith-Johanssen in Horten, who returned orders to keep protesting, but not to apply any force.[70]

Kapitän Dau had gone to his sea cabin to get some rest when things settled down in the late afternoon. Now he was called back to the bridge when a newcomer was sighted between the Norwegian torpedo boats. Dau

had his signalman repeatedly flash ‘What ship?’ from *Altmark*’s bridge, but no answer came back. Suspicious as ever, he ordered the tanker to advance further into the ice, to a position from where the torpedo boats and the stranger could be observed in silhouette against the open skyline at the mouth of the fjord. The distance between *Altmark* and the other ships increased to some 500–600 yards. At 23:46, a signal was flashed from the unknown ship in standard international code, asking: ‘Do you need assistance?’ followed by ‘Please hang a ladder over your side’, repeated several times. *Altmark* did not answer, but kept asking for the name of the unknown ship.[71]

At 23:58, *Cossack* let the mask fall and moved towards the tanker. A signal was flashed for the German to lie by for boarding, or fire would be opened. Dau used his searchlights to dazzle the men on *Cossack*’s bridge and accelerated back down the channel in the ice at full astern, trying to ram the destroyer. At the same time he ordered all men not needed in the engine room, to come on deck and the boats to be prepared for lowering. A weighted bag containing secret papers was thrown overboard while the water was still deep enough for it to sink beyond recovery.[72] *Altmark* had been rigged for self-destruction with primed demolition charges in the lower hull. Igniting these would have meant certain death for the 300 prisoners still confined below, however, and Dau hesitated to give the order. After a while it was too late and no orders were given to scuttle or open the sea-cocks.



Cossack turned to starboard, attempting to lay her port side onto the tanker. *Altmark* had picked up speed, though, and slammed into the destroyer just abaft the bridge. At an angle of some 30 degrees, the stern of the tanker scraped down the port side of her much lighter opponent. *Cossack* was pressed sideways with her starboard side towards the eastern shore of the fjord and a very dangerous situation developed. Being crushed between the tanker and shore would inevitably have meant severe damage to the destroyer and it is not unlikely that she would have lost seaworthiness. Expert manoeuvring and an immediate engine response to 'full power ahead' saved *Cossack* from crippling damage. The destroyer slipped aft of the onrushing tanker, re-emerging on her starboard side while

the edge of the ice held firm and kept *Cossack* off the rocky shoreline, the two ships scraping alongside each other.

When the two ships touched, some of the boarding party took the opportunity of jumping across to the tanker, in spite of the tremendous risk. The first was Lieutenant Commander Bradwell Turner, who leapt across in a 6-foot jump, which would make him famous throughout the Royal Navy. Petty Officer Norman Atkins followed, but was not as lucky. Falling short, he just managed to grab a railing and was helped on board by Turner, pretty shaken. Further aft, Sub-Lieutenant Craven jumped across from a torpedo davit, just moments before it was crushed by the contact with *Altmark*. A manila hawser was briefly secured from *Cossack*'s forecastle and some thirty-three men in leather jackets and steel helmets scrambled across, armed with rifles and bayonets. They spread quickly through the ship, while *Cossack* steered clear, the hawser having been cut.[73]

Turner and Craven led a group of men towards the bridge at a trot. Several weather-tight doors barred the route but they eventually managed to open them and found their way in, cornering most of the men on the bridge at gunpoint. 'Lieutenant Commander Turner […] ended for me a situation, which threatened the grounding or loss of *Cossack*,' Vian later wrote, continuing:

> Having with his escorts, disarmed such officers who carried revolvers, [Turner] dispossessed the officer on the starboard telegraphs, which were showing 'Full Speed Ahead' and placed them to 'Stop' The officer got to the port (duplicate telegraphs) and put them again to 'Full Speed Ahead'. Lieutenant Commander Turner dealt with this too and thereafter held the Germans with hands up until grounding occurred.[74]

First, the telegraphs in all likelihood showed 'Full speed astern' as *Altmark* went sternwards onto the ground. Second, in Kapitän Dau's version, the 'dispossessed' officer at the main telegraphs was Third Officer Walter Schmidt, while he himself manipulated the duplicates, deliberately grounding the ship to damage its rudder and propellers as much as possible

in an attempt to avoid capture. Whichever way it actually happened, the result was that *Altmark* grounded stern first at about 4 knots in Nodavika, close to the narrow road lining the east side of Jøssingfjord.[75]

Meanwhile, on deck, gunfire started. According to Vian's report the firing:

> commenced when Mr Smith, Gunner, in charge of the after party was shot from ahead as he advanced up an alleyway. Several ratings testify to being shot at, one lightly hit. Later on, when British prisoners were being released, a number of the German armed guard whom I only discovered after departure were seamen of *Graf Spee*, decamped over the stern of *Altmark*, and making their way across ice, reached an eminence on shore, from which they opened fire on boarding party on after deck. […] Following a most careful examination of witnesses, I have no doubt at all that the Germans fired first.[76]

Turner wrote in his report that orders were given to the boarding party:

> to use sufficient force to overcome opposition but not to fire unless fired at (as a safety measure, magazine cut-offs were closed and the chambers of rifles were not loaded…). […] I believe that the captain of the *Altmark* […] did not intend to use firearms; the firing which started on the German side was probably the act of individuals.[77]

In Dau's various accounts, including those to the SKL and the embassy in Oslo, he claims consistently that no German sailors were armed. Later, this was modified in a report to the SKL where he specified that while the two 20-mm A/A guns and ten rifles had been locked away before entering Norwegian waters, a total of eighteen pistols had been available. Some of these had been carried by those on duty near the prisoners or on the bridge, some by various officers, while some were stored in lockers or cupboards. The duty personnel carried 9-mm pistols, the officers 7.65-mms. After the British had left, seven of the pistols could not be accounted for. One had allegedly been thrown overboard, the other six, Dau held, had been 'stolen by the British'.[78] All of those carrying the guns swore to Dau they had not used them, not even to threaten anyone from the boarding party.[79]

Still, it is not unthinkable that one or more of the men decided to resist the British on their own initiative, particularly the naval men from *Graf Spee*. Neither is it unthinkable that some of the British marines disregarded Turner's orders and loaded their guns, just in case. Thus, a situation on the after deck, not seen from the bridge, might have got out of hand. Turner writes that no immediate opposition was encountered when he jumped across and later, except for some minor trouble aft, they were met with 'sullen obedience'. Dau, on the other hand, describes the British marines as 'nervous and very scared'. None of the Norwegian reports mentions anything other than British use of firearms. The people of Jøssinghavn later told of a single shot being heard some time before the main firing started, but Løytnant Halvorsen in his report is very specific that he did not see any German use of guns – although arguably he was not in the best position to observe it all. *Altmark*'s Dr Tyrolt treated a wounded British sailor for a bullet wound in the shoulder after the event, but rumour had it he had been shot by one of his own mates.[80]

It seems that we shall never learn what initiated the use of firearms that night. Once it had started, though, the result was incontestably one-sided. Several Germans lowered themselves from the deck and escaped across the ice towards shore. Unfortunately, they were fired at, several being killed or wounded. The Norwegian customs officer Odd Egaas was on deck on the starboard side when the British boarded. He did not observe any Germans with guns from where he stood, nor did he observe any form of resistance to the boarding from the German sailors. Egaas wore his uniform, and was held at the point of two British bayonets until it had been clarified that he was Norwegian. In the meantime the shooting had started on the other side of the deck and, finding events to be beyond his normal call of duty, Egaas followed suit when some of *Altmark*'s crew lowered themselves onto the ice and ran ashore.[81]

When the shooting started, Halvorsen approached Vian, declaring that he had agreed to ‘observe an inspection, not a gunfight’. After the events, Vian held that it had been agreed that Halvorsen should join the boarding party, while Halvorsen maintained he had agreed to join an inspection as an observer but never agreed to ‘board the *Altmark* for an armed intervention, against German opposition’. Halvorsen returned to *Kjell*, which was called alongside the destroyer. From his ship, he could see the boarding party firing at Germans escaping over the ice. Overminør Olav Rindseth, who had command of *Kjell* while Halvorsen was on board *Cossack*, saw one German sailor who had fallen into the water being shot several times as he climbed onto the ice.[82]

Civilians watching the events from shore had to duck into the cellars of their houses to avoid stray bullets and experienced the shooting as ‘rather wild’.[83] At least two bullets hit the wheelhouse of *Fireren*, and a Norwegian rating, who had been at the telephone exchange with a message, got a bullet through the hand as he ran back. In spite of several bullets hitting the houses, there were no other Norwegian casualties. Confusion reigned for some time, and a couple of the Germans fled for several miles into the mountains.[84]

Six Germans were killed outright and a seventh died two days later in Kristiansand hospital. Five were seriously wounded and another five had lighter wounds.[85] Eventually, the shooting died down and sailors from *Cossack* started rescuing Germans who had gone through the ice and were struggling in the icy water. Lieutenant Commander Gerald Ormsby and Paymaster Lieutenant Edmund Burkitt even jumped into the water to save one sailor near *Altmark*’s bow. Unfortunately the attempts were unsuccessful and the man died, bringing the German dead to eight.[86]

Meanwhile, Lieutenant Commander Turner began the search for prisoners on board *Altmark*, bringing along Kapitän Dau, who had by now been identified, and a duty officer named Weichert. Some of the doors and

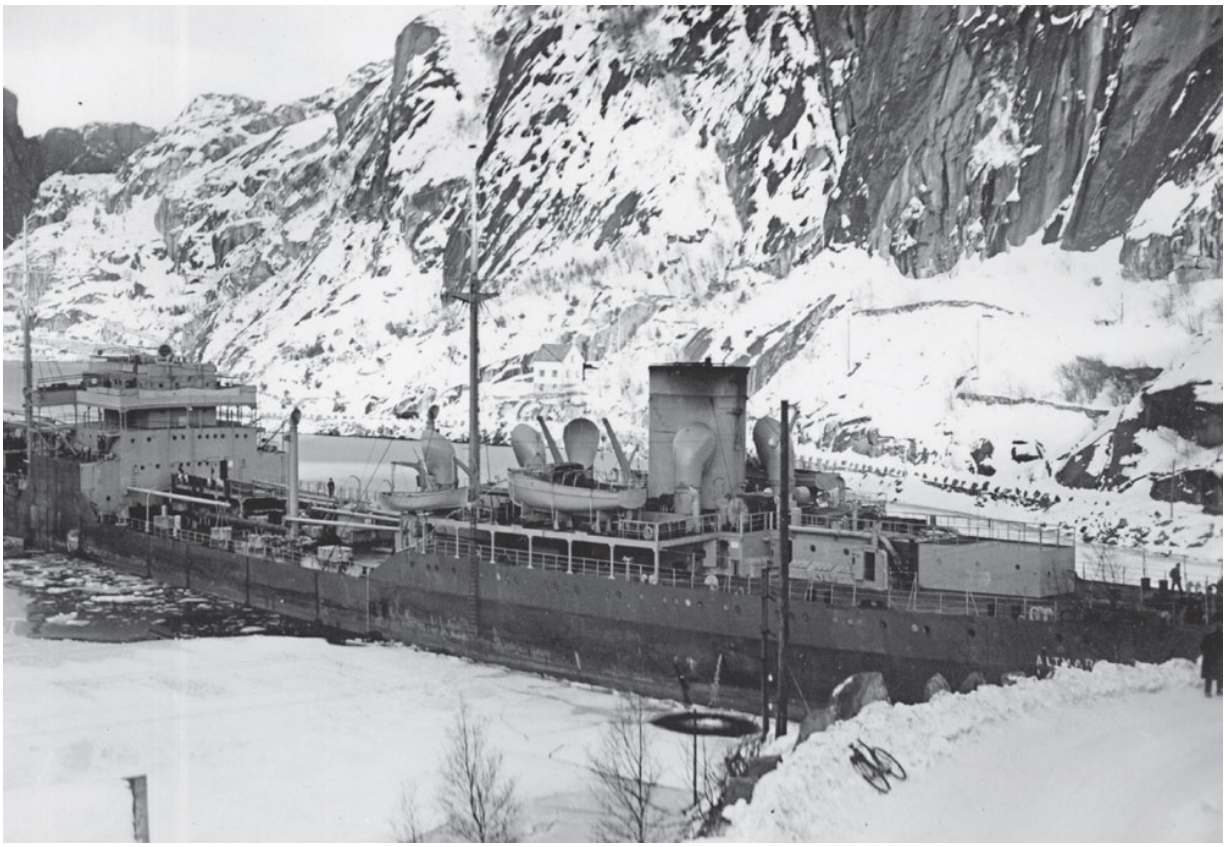
hatches were locked while others had been lashed with wire. Eventually, they were all opened, and Turner allegedly shouted, 'Any Englishmen down there?' A clamorous response greeted him – 'Yes, we're all English' – to which legend has it he answered, 'Come up then. The Navy's 'ere!'[87] The 299 captives were released from the holds and taken on deck for transfer to *Cossack*.[88]

Whilst the search for the prisoners was undertaken, Paymaster Sub-Lieutenant Craven remained on the bridge with some British guards and about ten Germans. After a while, the latter became rather anxious and requested permission to put on their lifebelts. Permission was refused, but Craven, who spoke reasonable German asked what the matter was. They replied that they believed Dau had ordered the demolition charges around the ship to be set 'to detonate at 00:30'. This was forwarded to *Cossack*, which hurriedly came alongside to embark the prisoners. Some of the British officers believed the scuttling might be a bluff, but Vian decided not to take any chances. Just as Sub-Lieutenant Craven ordered all men off the bridge of *Altmark*, a faint, dull sound was heard by some and believed to be an explosion.[89] Dau, on the other hand, claimed that things happened so fast that he was never able to initiate any scuttling, and that this was the reason he ran his ship aground.[90]

Once the embarkation of the prisoners and the boarding party was concluded, Vian backed *Cossack* off and at midnight (BrT) gave the order to head back down the fjord. A medical officer was embarked from *Sikh* to attend the liberated prisoners, but, apart from one case of leprosy among the Lascars, they were all found to be in a good condition, considering the circumstances.

To their surprise and immense relief, the Germans were all left behind, including Kapitän Dau. No attempt was made by the British to damage or sink the tanker, neither was the radio room put out of action.[91]

With *Arethusa* and the destroyers closing up, *Cossack* headed west at 25 knots. A signal was sent to the Admiralty and the C-in-C Home Fleet at 01:50 (BrT) stating that the prisoners had been freed, *Altmark* was unseaworthy and that the Norwegians had refused to cooperate but remained passive.[92] At 02:50 (BrT) this was augmented by a second signal informing that fighting had taken place with one British and several German casualties and that *Cossack* was now 'somewhat battered'. It was also conveyed that the prisoners stated they were not impressed by the Norwegian Navy's search of the *Altmark* when she had been stopped. At 03:40 (BrT) came the reply: 'Well done *Cossack*', but it was followed some twenty minutes later by a sombre request for details of what had taken place between *Cossack* and the Norwegian ships, more facts on the use of weapons and the treatment of the prisoners on board *Altmark*.[93]



The morning after. *Altmark* aground Jøssingfjord. (Author's collection)

It is interesting to note that Vian initially reported the treatment of the prisoners on board *Altmark* to have been 'satisfactory' in spite of later claims that the tanker had been a 'slave ship'. Furthermore, Vice Admiral Gordon Campbell, who interviewed Captain Starr, master of *Taiora*, and Captain Brown, master of *Huntsman*, after their release from *Altmark*, concluded that – except for the sanitary situation – the conditions had given few grounds for complaint. The two masters also confirmed that, as far as they were aware, they had received the same rations as the Germans on board. Later, a series of statements were made by the prisoners or those who interviewed them, concluding that although their treatment was harsh it was rarely brutal and 'a considerable way short of justifying the allegations and charges against [Captain Dau and his crew] that were unfortunately given wide circulation after the release of the prisoners by HMS *Cossack*'. In the name of morale and propaganda, Churchill preferred to keep the impression that *Altmark* had been a 'hell ship' and saw no reason to exonerate a German naval master.[94]

Feelings of Disappointment and Concern

When the shooting died down, the people of Jøssinghavn emerged from their shelters to try to help the frozen and bewildered German sailors streaming ashore across the ice or down from the hills where they had taken refuge. Some of them were in a bad shape, having walked several miles in deep snow. Others were wounded and received treatment in *Altmark*'s sickbay where a local Norwegian doctor arrived to assist Dr Tyrolt. Those seriously wounded were stabilised and prepared for transport to hospitals in Kristiansand and Flekkefjord. As many as possible of the sailors from *Altmark*, including those who ventured back during the night, were taken into the houses at Jøssingfjord, given dry clothes, hot coffee and a dram if available. All but very few were scared and confused.

Cossack bringing the rescuees to Leith in the afternoon of 17 February.

They willingly told stories of the harsh conditions on board *Altmark*, the indifference of the Norwegians in not setting them free, and the boldness of the British sailors doing just that. (Author's collection)

Kaptein Lura ordered most of the men from *Fireren* and *Kjell* onshore to assist while Halvorsen went to the telephone exchange to convey the latest events to Kristiansand. Halvorsen's call came through at 01:43 and his report was promptly forwarded to the Foreign Office via the commanding admiral. Later, Halvorsen boarded *Altmark* to talk to Dau, who was 'very upset and harsh in his comments towards the British'. At 00:55, Dau had sent a telegram to the embassy in Oslo, stating that he had been 'attacked by destroyer *Kossak*' and that several of the crew were missing, possibly captured. Two hours later, after learning from Halvorsen that most of those missing were safe with the Norwegians, he submitted an updated telegram stating that there were 'four dead and five seriously wounded'. Dau spent most of the following day at the telephone exchange, sending countless telegrams and making telephone calls to the German Embassy in Oslo or to Germany, building the account as the details were revealed. It was late in the evening of the 17th before Dau could report that all men except one had been accounted for, and that no Germans had been captured by the British.[95]

At dawn on the 17th, Vian's flotilla was met by aircraft of the RAF and escorted across the North Sea. *Arethusa* was detached for Scapa Flow at 07:05 and later in the morning *Cossack* was diverted to Leith while the other destroyers continued to Rosyth. Before arrival, Vian addressed the liberated prisoners, telling them on behalf of the navy of the 'unbounded admiration for the courage, which sustained in their voyages the officers and men of the Merchant Fleet, and of our heartfelt gladness that those of that service who were on board now should have been released from captivity'. The merchant sailors reciprocated gladly by telling every journalist and cameraman in Leith, where *Cossack* berthed at 15:45, of their respect for the gallant men of the Royal Navy.

Although it had only been a minor action of no operational importance, the navy had pulled it off well. In gloomy times with few other

achievements and many losses, the boldness of the action and its successful outcome caught the imagination of the British people. The diplomatic turmoil was yet to come and was no worry at the moment. In his report submitted to the Admiralty on 23 February, Captain Vian stated: 'The clarity and unequivocal character of the orders received from the Admiralty in connection with the *Altmark* incident rendered their execution straightforward.'[96] Churchill must have purred.

In Germany, the B-Dienst intercepted several of the signals from the British ships, and at 06:00 in the morning of the 17th the SKL could read the deciphered report of how *Cossack* had freed the British prisoners but left the *Altmark* behind with all her crew. The report also said that the 'submarine *Seal*' had been left lurking outside the entrance to the fjord. What had become of the Norwegian torpedo boats was unclear.[97]

The submarine left behind was actually *Triad*. A few days later, she was replaced by *Truant* while British reconnaissance aircraft flew overhead daily. [98] One night, Lieutenant Commander Hutchinson took *Truant* quietly into the fjord on the surface to check the situation. Neither the German guards nor the Norwegian torpedo boats observed the submarine and, satisfied that the tanker was still firmly grounded, Hutchinson left as quietly as he had come.[99]

Jøssingfjord a few days later. *Altmark* remains aground while the Norwegian minesweeper *Olav Tryggvasson* has arrived, taking command. Part of the ice has melted, having been broken up by *Altmark* and *Cossack*, but the edge that kept the destroyer from grounding can still be seen. (E Ettrup collection)

In Norway, there were widespread feelings of disappointment and concern – all the more so as British newspapers reported some of the sailors expressing very critical views of the Norwegians and their lack of prompt action to free them. While agreeing that perhaps more should have been done by the navy to reveal the true nature of *Altmark* at an earlier stage, most Norwegians felt regret that the British Navy had acted as it did. Though many, especially in the coastal regions, admired the seamanship and resolute behaviour of the men of *Cossack*, most still felt that Britain had unnecessarily insulted their country and committed an unfriendly act of violence. That the orders to violate Norwegian neutrality had come from the Admiralty, which most Norwegians saw as a guarantor for the security of the immense coastline, added insult to injury. Most Norwegians felt deep anger at Germany sinking Norwegian merchant ships, but few wished to be forced into the war by decisions taken in another country.

In the morning of the 17th, Naval Attaché Schreiber called the Admiral Staff in Oslo, using strong language regarding not having been kept informed of the previous night's events in Jøssingfjord as promised. He was cut short and asked to come in person if he had a message to convey. Arriving at 10:30, the first thing he said was, 'This means war.' After some discussions, though, it turned out that Schreiber believed *Altmark* had been blown up and sunk with a large loss of life.[100] When properly informed of the events by Admiral Diesen, he mellowed visibly and left after a while, stating, 'perhaps there will be no war after all.'

Schreiber later reported this meeting to the OKM in Berlin, quoting Diesen as having said: 'What chances would a small torpedo boat with only two machine cannons on deck have against a cruiser? A single salvo would have wiped him out. Besides, the ice was so thick that our small boats could not follow the sturdy British destroyers.' Schreiber claimed he had responded to the admiral that according to Kapitän Dau, the ice had not been *that* thick. To the attaché's comment that he found the assertiveness of

the Norwegian captains somewhat wanting, and that ‘at least one officer should have been willing to give his life for his country’s neutrality,’ Diesen simply ‘shrugged his shoulders’.[101]

Minister Bräuer delivered the official German protest by telephone to the Norwegian Foreign Office around 09:30. In Koht’s absence, it was received by Under-Secretary Bull. The sharp note claimed that the Norwegian Navy had not given ‘adequate protection’ to *Altmark* in spite of assurances from both the Admiral Staff and the Foreign Office. Strong protests would have to be made and ample compensation was expected. The note concluded that the situation ‘was serious and might bring about the gravest of consequences’.[102]

The British kept a close eye on *Altmark*. This is a reconnaissance photo of Jøssingfjord taken from 3,500 feet on 24 February. (NA-AIR 28/470)

The Norwegian answer claimed the officers of the Norwegian torpedo boats had acted correctly according to their instructions and could not be blamed for failing to stand up to vastly superior British forces. It was made clear to the Germans, though, that strong protest would be made to London and similar events prevented. Bräuer asked to see Prime Minister Johan Nygaardsvold later in the afternoon, presumably to repeat the protests directly to him, but later changed his mind and, to the surprise of the Norwegian government and Foreign Office, no further official statements were received from Berlin. Quite the opposite – when meeting Koht on the 22nd, Bräuer thanked him for 'the Norwegian Navy's participation during the funeral of the deceased German sailors'. On Hitler's order, the German Foreign Office focused their propaganda and abuse towards London, largely referring to Norway as a victim of British aggression.[103]

Funeral of the dead from *Altmark*, 19 February. The uniformed man speaking is Curt Bräuer, the German minister to Norway. The capped person behind him with the goatee beard is Captain Dau. Six men were buried on that day. Quite a few of the local population turned up, followed by a large German press corps. (E Ettrup collection)

On Monday 19 February, the crew of *Altmark* buried six of their dead in the churchyard at Hauge.[104] Minister Bräuer and other representatives from the embassy in Oslo attended, several of them in uniform. Norwegian officials were there as well, including a guard of honour from the minelayer *Olav Tryggvason*, arriving that day for Kommandørkaptein Trygve Briseid to take over command in Jøssingfjord. Quite a few of the local population turned up too, followed by a large German press corps. The coffins were draped in Nazi flags and lowered under salute from the Germans. After a German priest had concluded the services, Bräuer gave a short speech expressing the official German view that the sailors 'died heroically for their Führer while fighting British pirates'. Dau said a few similar words before the Germans sang a hymn. Representing the Norwegian side, Kommandør Severin Wigers from the Norwegian Navy laid down a wreath and gave a brief speech (in German) in which he expressed 'the anger which this violation had aroused in the Norwegian people'. The latter speech resulted in complaints from the British Embassy to the Foreign Office. Under-Secretary Bull countered that, as long as Wigers was just repeating the words of his government, there was no reason to react.[105]

A civil Court of Inquiry was opened in Egersund on the 23 February. Captain Dau attended with his first officer and the German consul in Stavanger, Mr Achilles. Mr Spence, the British vice consul in Stavanger, was also asked by the court to attend and arrived accompanied by Commander Platt, a representative from London. On the second day of the court, as Dau was called to witness, he protested at the presence of the two British representatives, as they had no direct relevance to the case. After some considerable discussion, this was upheld by the magistrate and, against their protests, Spence and Platt had to leave the courtroom while Dau gave his evidence. After Dau and his first officer had been heard by the court, the two British representatives were allowed to return.[106] Both the British and German representatives took notes during the inquest, and

extensive summaries of statements and deliberations were continually forwarded to their respective legations and foreign offices.

In Jøssingfjord, the German ore ship *Wiegand* came by en route from Narvik on the 21st and, the following day, *Altmark* was pulled off the ground.[107] Divers reported the rudder gone, bent blades on the starboard propeller and the better part of one blade missing from the port. Both shafts were unharmed, though, and in spite of the damage the ship would be manoeuvrable and capable of 10–11 knots. On 6 March, *Altmark* was declared seaworthy and, escorted by *Olav Tryggvason* and *Odin*, proceeded to Sandefjord at 8 knots for basic repairs.[108] The British had decided to abandon their demand for the tanker to be interned and made no comment. The submarine *Unity* was stalking the transport with orders to attack if *Altmark* ventured outside Norwegian territory. Ice conditions had lessened, though, and she did not need to. Three weeks later, *Altmark* slipped quietly southward through Swedish and Danish waters and, assisted by a tug, reached Kiel in the evening of 27 March.[109] The wounded from *Altmark* taken to Norwegian hospitals were repatriated individually. By 9 April, the day of the German invasion of Norway, the last wounded man, Stoker Augustin, was still in Kristiansand hospital, while Engineer Clausen was on his way home.[110]

Diplomatic Turmoil

The *Altmark* incident generated passionate discussions everywhere. Most legal experts, including many British, acknowledged the Norwegian interpretation of the Hague Convention, which gave *Altmark*, as a naval auxiliary under the *Reichsdienstflagge*, the right to pass through Norwegian territory uninspected and unhindered by the twenty-four-hour rule envisioned for warships entering ports or anchorages. The carrying of prisoners on board a commissioned ship in transit through the Leads was in itself neither a breach of the Hague Convention, nor of the Norwegian

neutrality regulations, even if Churchill and the British Cabinet would later claim it was.

The two key questions relating to the *Altmark* incident were whether the tanker's passage through Norwegian waters was 'prolonged' and therefore an 'abuse' and, when the Norwegian government decided it was not, whether the British government had the right to overrule that decision and act with force inside Norwegian territory. A year earlier, in an exchange of notes regarding the Norwegian Neutrality Act during the summer of 1939, the British Foreign Office had made it clear that 'while His Majesty's Government do not deny there may, in special circumstances be a right to refuse the belligerent warships entry into neutral territorial waters, they have always maintained and must continue to maintain the existence of such right of entry for purposes of innocent passage.' To this, the Norwegian government had replied, 'they interpreted the regulation in question in the same way.' Limitations to 'innocent passage' were not discussed.[111]

When Dau claimed immunity from inspection, he defined his ship as a man-of-war, restricting his right of passage. If, as Dau also held, *Altmark* was a regular merchantman, he could not refuse full inspection by the Norwegians, who would have been within their rights to release the prisoners, held unlawfully on board a civilian vessel. As the German concept of a 'state ship' was not acknowledged, there were only two possible definitions: a warship or a civilian ship. By allowing the auxiliary to pass through Bergen *krigshavn*, Norwegian authorities defined *Altmark* as a civilian ship – a clear mistake. Furthermore, there is no doubt that Dau lied to the Norwegian inspecting officers, saying he had no prisoners on board, and therefore forfeited his right to 'innocent passage'.

The question then remains whether any of this, which was not known to the British at the time of their decision to intervene, justified sending *Cossack* into Jøssingfjord – without advance protest and notification to

Norwegian authorities. The argument that *Altmark*'s voyage through Norwegian territorial waters to escape British capture was an abuse of Norwegian neutrality, giving the British a right to intercede and release their own countrymen, is a matter of opinion rather than a legal fact – admitted by the British Foreign Office. This is all the more the case as the deliberations above are hindsight and do not reflect any debate in the British Cabinet between 14 and 16 February 1940.[112]

At 09:00 in the morning of the 17th, Prime Minister Nygaardsvold called a meeting in the Foreign Office in Oslo. Commanding Admiral Diesen and Under-Secretary Bull were both present. Koht was still in Trondheim, but joined over the telephone.[113] The British intervention was a serious breach of Norwegian neutrality and a firm protest would have to be made to the British government. While the wording of the note was agreed and typed, the British minister Dormer was called to the Foreign Office. He arrived at 10:30, and Nygaardsvold went straight to the point, expressing the 'strong consternation and grief felt by the Norwegian Government at this infringement of Norwegian neutrality'. What had happened, Nygaardsvold said, had hurt the Norwegian people deeply – as well as him personally – particularly coming from Great Britain, a country 'with which our relation has been so fine and with which we so much wish to remain friendly'. He also informed Dormer that instructions had been sent to the Norwegian Embassy in London to submit 'a vigorous protest against this violation' to the British government and let it know that 'we could not have imagined such a step from the British Navy'. A rather tense conversation followed, in which Dormer pointed to *Altmark*'s use of radio inside Norwegian waters – an action that he held was illegal and should have resulted in arrest. Nygaardsvold answered brusquely that minor German violations inside Norwegian territorial waters were of no concern to the British and certainly did not justify further violations and use of force. Carrying prisoners in a warship was no offence against the neutrality, he

added, concluding that *Altmark* had the right to pass through Norwegian waters. Dormer, who had not been informed by London that the British prisoners had actually been released when he was called to the meeting, held that *Altmark*'s passage had been far from innocent, justifying the British intervention.

With few other arguments up his sleeve, Dormer then brought up the sinking of British ships in December and the *Westerwald* case as well as German behaviour on the high seas in general, claiming that it was well known that German U-boats were using Norwegian territorial waters, adding that His Majesty's government 'would take a serious view if the *Altmark* was allowed to go free'. A visibly angered Nygaardsvold, supported by Under-Secretary Bull, dismissed these allegations, saying that if German infringements had occurred in the previous cases at all, they were minor and did not under any circumstance justify British warships violating Norwegian waters in such a serious manner. The Norwegian prime minister concluded the meeting by stating that Norway was a small nation with limited naval forces but would continue to object to any violations of its neutrality, even from a powerful nation which Norway had always regarded as a friend.[114]

In London, Minister Erik Colban was received by Lord Halifax on the 17th, and delivered the protest note from the Norwegian government 'against this grave violation of Norwegian territorial waters, which has caused strong indignation […] and cannot be due to any mistake or difference of opinion with regard to the limit of the territorial waters'. Obviously, Halifax had a different opinion of the justification for the action: 'In short, if no prisoners had been found when the ship was boarded, the Norwegian Government would have had an excellent ground for complaint. The prisoners, however, having been found, His Majesty's Government considered that they had every right to complain that the search carried out had been perfunctory.'[115]

The conversation stalled somewhat, though, when Colban asked if the British Foreign Office had at any stage tried to contact the Norwegian government to discuss the issue and Halifax had to admit they had not, 'in view of the urgency of the matter'. Colban demanded that the Royal Navy be issued instructions respecting Norwegian sovereignty in the future and insisted the prisoners should be returned to Norway. Halifax answered that even, if the British government did not deny the technical infringement of Norwegian territorial waters, the action had been provoked by the Norwegian government, which had 'failed in their duties as neutrals'. Knowing that *Altmark* carried prisoners, they should have felt obliged to have the vessel properly searched and released the sailors on humanitarian grounds. Legal questions were of less importance than the life and health of 300 to 400 British subjects, and a return of the released prisoners to Norway was not an option. Colban was assured that the action had been taken with the 'full assent of His Majesty's Government'.[116]

Foreign Minister Koht, who returned to Oslo on 19 February, called the incident:

> the most blatant violation of Norwegian neutrality experienced in this war. But even if we in this case were not able to defend our neutrality [against superior force], it is not a given that the state suffering the damage – Germany – has the right to bring the war onto our territory. Wishing to stay neutral does not mean we are indifferent to the war. Quite the contrary, we are deeply concerned by the disparity from which the hostilities originated … and in its outcome.[117]

There was a strong feeling among many Norwegian politicians that the action in Jøssingfjord had been very deliberate. Knowing well that *Altmark* had not violated Norwegian neutrality, the British Cabinet and the Royal Navy nevertheless decided to liberate the prisoners and score on the home front, confident that the reactions from Norway would not be too awkward to handle as the Norwegians knew which side they were on. The arguments voiced now were aimed at justifying the action to the USA and other neutral countries.

Many Norwegian naval officers were embittered over British criticism of their colleagues and what they considered double standards as Norwegian destroyers and torpedo boats regularly escorted armed British merchantmen through the Leads with guns and ammunition poorly concealed underneath tarpaulins, if at all.[118] Bergen *krigshavn* was the assembly port for most North Sea convoys but there had never been any issue with British ships anchoring there, armed or not. Most senior officers also realised that the speed with which the decisions to act had obviously been taken had allowed little time for deliberating legal perspectives, and the British decision-makers had been certain of the fundamental Norwegian friendship and the limited risk that they would push Norway into the arms of Germany.

After the invasion of Norway in April 1940, the Germans set up a sign in Jøssingfjord, commemorating the event. First there was a small sign, later this large one. The site became something of a 'tourist attraction' as it was on the main coastal road from east to west at the time. (Author's collection)

The decision that the Norwegian torpedo boats should not open fire on *Cossack* came from the commanding admiral via Rear Admiral Smith-Johanssen in Horten. It was in line with the general neutrality instructions not to use force against overwhelming superiority but there is no doubt that it had a political overprint of avoiding confrontations with British forces. Inside the confined waters of Jøssingfjord, *Cossack* would have been vulnerable had torpedoes been fired at her and Vian would undoubtedly have fired back if threatened. Unavoidable Norwegian and British casualties in such a case would have created a serious political situation, with unforeseeable consequences.[119]

In an account to the Norwegian Parliament, the Storting, on 19 February, Foreign Minister Koht summarised the views of the Norwegian government on the *Altmark* case. Warships, such as the *Altmark* undeniably was, he said, had the right to pass uninspected according to international law, carrying prisoners or not. This had been discussed and agreed with British authorities as late as September 1939 and was described in numerous British books on maritime law. *Altmark* had the right to claim immunity and could as such pass without inspection, provided she obeyed the regulations of the Neutrality Act for warships. Dau's use of radio was a serious breach, but did not justify a British intervention. Koht concluded by saying that in his and the government's opinion, the British Navy, with overwhelming force, had violated the rights of a small country that only wished to keep its neutrality. A unanimous parliament supported this position and a note to London was agreed. King Haakon, with extraordinary openness, confided to the new French minister in Oslo, Count Robert de Dampierre, that Norway was increasingly being used as 'a kind of football field by the two antagonists'.[120]

Reading between the lines of the official Cabinet documents for this period, it may be deduced that the *Altmark* incident and the following turmoil actually demonstrated to Chamberlain and Halifax that Norway

would probably accept an Allied landing without serious military resistance. The Anglo-Norwegian shipping agreement was approved in the British Cabinet shortly afterwards, and it is quite possible to argue that the *Altmark* incident proved the strength rather than the weakness of Norwegian neutrality.

Altmark went through lengthy repairs and was subsequently renamed *Uckermark*. Having been sent to Japan as a blockade-breaker in early 1941, *Uckermark* was totally destroyed by an explosion in her oil tanks in the port of Yokohama in November 1942, caused by a spark from welding work.[121] Captain Dau did not sail again but spent the rest of the war coordinating the operations of the supply ships at Fleet Command. He committed suicide when all hope was lost for the Third Reich in May 1945.

— 24 —
Crossroads

The Desire to Assist Finland

HITLER SEETHED AFTER THE *Altmark* episode. Generalmajor Jodl wrote in his diary on 19 February that the Führer was enraged at the lack of resistance from Captain Dau and his men: 'No resistance, no British losses'. The Royal Navy had humiliated Germany, and the Norwegians had been unable – even unwilling – to defend their neutrality. Alfred Rosenberg, head of the Nazi Party's internal Foreign Policy Office and Propaganda Section, wrote in his diary: 'Really a stupid initiative on Churchill's part. […] I saw the Führer today and […] there is nothing left of his determination to maintain the Nordic neutrality.'[1] Admiral Raeder was called to the Chancellery, where Hitler told him that he no longer believed Norway would remain neutral. Swift action was needed. Raeder suggested that maintaining Norwegian neutrality was probably still the best solution for the protection of the transport of ore to Germany, but it was all too late. From now on, Norway had Hitler's full attention.[2]

On 21 February the fifty-five-year-old General der Infanterie Nicolaus von Falkenhorst, C-in-C of XXI Army Corps, was called to Berlin and, to his amazement, informed that he had been put in charge of the planning and execution of the imminent German invasion of Norway. All other tasks were to be put aside and with his staff he was to develop, in utmost secrecy, an operations plan for synchronised landings at Oslo, Bergen, Trondheim, Kristiansand, Stavanger and Narvik. Denmark was also to be occupied to secure the use of the airfields in northern Jylland.

Hitler issued the formal directive for Operation Weserübung on 1 March, authorising the commencement of operational planning for a simultaneous occupation of Norway (Weserübung Nord) and Denmark (Weserübung Süd). Maximum surprise should be the priority and, if at all possible, the operation should be carried out as a 'peaceful occupation' under the pretext of forestalling Allied intervention and 'armed protection' of Scandinavian neutrality. Resistance would not be tolerated and would be met with all necessary force. Admiral Carls of Marinegruppenkommando Ost in Kiel would be in charge of the naval forces for eastern Denmark and the Oslofjord, while Generaladmiral Saalwächter of Marinegruppenkommando West in Wilhelmshaven would be in charge of the units to be used in southern and western Norway.[3]

The time and energy spent by the British War Cabinet discussing Scandinavia during the winter of 1939/40 was considerable. The issue was on the agenda in almost every meeting, several times as the only item. Among the ministers of the War Cabinet and the senior civil servants there was, however, a fundamental uncertainty of what to do – and for what reason.

In a memorandum to the Foreign Office, Orme Sargent, deputy permanent undersecretary at the Foreign Office, held that 'our desire to assist Finland is only a pretext to justify our occupying Northern Sweden. The original object of a Scandinavia expedition was to prevent Germany from obtaining the Gällivare iron ore, because we believed that by depriving [Germany] of this, we should bring her to her knees within a few months.'[4]

Sargent argued for an expedition to seize control of the Lapland ore fields. Otherwise, Finland would probably collapse during the spring and thereafter Sweden would 'fall completely under German domination'. German retaliation to such an expedition would likely take the form of an invasion of southern Norway and Sweden and perhaps the Åland Islands.

Even if an advance from here should succeed in driving the Allied expeditionary forces back, it would be possible 'before retreating, to damage the ironfields and the port of Luleå so as to make it impossible for the Germans to resume shipments of iron ore for a very considerable time.' Minister Maurice Hankey, on the other hand, told Halifax that even if an occupation of the Lapland ore fields 'was a strong additional', he believed it 'worthwhile on merits to send help to Finland in the expectation that as long as Russia was preoccupied, she would not be able to send much help to Germany'.[5]

Churchill meanwhile argued for aggressive naval measures. The *Altmark* incident had enhanced his standing, and he brought the mine-laying proposal forward again. A limited naval operation, he held, could be justified by pointing to Norwegian lassitude in Jøssingfjord. This would undoubtedly provoke a German action and 'open the door'.[6]

On 19 February, the Admiralty and the Cabinet were informed by the embassy in Stockholm that, due to the severe ice conditions in the Belts and the Baltic, German ore ships from Narvik were now crossing the Skagerrak from Norwegian waters towards the German North Sea ports. Halifax brought this up with Churchill, commenting that while the navy was 'always pressing for leave to intercept in territorial waters, here was all the ore trade passing through non-territorial waters'. This was not what Churchill was after, though, and, apparently taken off guard, he asked Admiral Pound 'what answer to give him, apart from the proximity of German shore-based aircraft'. Admitting that Lord Halifax had a good point, Pound nevertheless realised that his First Lord did not want to pursue this angle and eventually, all that happened was that VA(S) Horton was instructed to intensify the efforts of his submarines in Skagerrak.[7]

Unperturbed, on 20 February, Churchill ordered the Admiralty to initiate urgent preparations for a mine-laying operation, which, 'being minor and innocent, may be called Wilfred'. Landing in Norway without

Norwegian consent would be a mistake, Churchill argued, and even a few shots between Norwegian and British forces would be 'most unfortunate', but he was fairly certain that mining of selected places of the Leads could be carried out without confronting the RNN.[8]

British legal experts, on the other hand, advised the Cabinet that there was no way of circumventing the fact that laying mines in neutral waters would be a violation of the Hague Convention. Arguments that the Norwegian government failed to prevent improper use of its territorial waters would have to be documented by indisputable evidence, and the lawyers found it:

> extremely difficult to make any case maintaining that the carriage of Swedish or Norwegian iron ore from Narvik is in any way improper or something which Norway ought not to permit. The right of 'innocent passage' through neutral territorial waters is one to which the Admiralty have in the past attached great importance and frequently insisted on maintaining [and there would be] considerable chance of statements made in the past being quoted in a highly inconvenient manner.[9]

The Ministry of Economic Warfare, which had so far been among the supporters of severing the German ore traffic, now held that the consequences for Britain of losing the supply of Swedish iron ore and other Danish and Norwegian products would be serious. Even more dramatic would be the consequences should Norway denounce the Anglo-Norwegian shipping agreement or the war trade agreement, which was about to be signed. Hence, the MEW concluded that 'it would hardly be possible to choose a less useful moment for carrying out the [mining] operation.'[10]

Chamberlain, trying to find a way through the different initiatives, stated at the War Cabinet meeting on 23 February that 'although his instincts were in favour of taking action, […] only two months remain of the Narvik traffic, so cutting it off would impose comparatively little loss on the Germans.'[11]

As Narvik had, Kiruna in Sweden became a strategic place, and the railway station seen here became the focus of numerous plans and schemes. (Author’s collection)

Six days later, on the 29th, in spite of pressure from several quarters, Chamberlain had arrived at the conclusion that he was ‘not at all convinced that the measure proposed would be opportune at the moment’, and he could ‘not advise the War Cabinet to take action in Norwegian territorial waters for the present’. The mine-laying would have to be deferred ‘and its execution could be reconsidered as the situation developed’. As expected, Churchill opposed the conclusion of the Cabinet, arguing that mine-laying in Norwegian waters ‘could do more to hasten the defeat of Germany than any other single measure within our power at the present time’. For now, he was overruled, though, and in a letter to Ambassador Corbin on the same day, the French government was notified that the British Cabinet did not think mine-laying or any other naval action offered ‘advantages sufficient to offset the disadvantages on moral ground […] but rather to make still more difficult […] the plan for sending help to Finland […] as the Allies would inevitably face the hostility of Norway and Sweden’.[12]

Meanwhile, the Allied military planning process for a Scandinavian land operation continued unperturbed by political vacillation. In late February, General Ironside confirmed that a *demibrigade* (three battalions) of Chasseurs Alpins and one British regular brigade, strengthened by three companies of skiers, were being prepared to land at Narvik and move up the railway to secure the Lapland ore fields – Operation Avonmouth. Only a small part of this – two or three brigades of French Alpine Troops and Foreign Legionnaires – would continue towards Finland, where they should remain as far west as possible to avoid getting too close to the Russians or being cut off by German interventions when the Gulf of Bothnia thawed.

The second part of the plan, Operation Stratford, would see the transfer of five British battalions to occupy Stavanger, Bergen and Trondheim, providing alternative supply routes to Finland and deny German access to bridgeheads for potential counterattacks.[13] In addition, three divisions were to stand by to move in over Trondheim, to ‘implement aid to Sweden

should she call for it' – Operation Plymouth. French ships, troops and equipment were assembled in Brest and the Channel ports. Altogether up to a hundred thousand British and fifty thousand French troops with strong naval and air support might eventually be involved, but, of these, only ten to fifteen thousand would actually go to Finland. Stratford and Avonmouth were the primary operations, while Finland was a sideshow. German landings in southern Sweden and eastern Norway would be very likely and up to fifteen divisions could be deployed in Scandinavia rather than on the Western Front. Retaliatory German seaborne landings 'at any western port north of and including Stavanger' would be handled by the Royal Navy, but airborne raids as far north as Bergen could not be ruled out.

Hence, while the British politicians argued what to do in Scandinavia, the military had developed a large-scale operation with multiple targets in two neutral countries. From their point of view, the expedition should start as early as possible. The latest date for a landing, lest the Gulf of Bothnia should become ice free and open to German intervention, was estimated to be 3 April. [14]

From Paris, sending an expedition to Finland via Norway and Sweden looked very promising. A second front in Scandinavia would take pressure off the Maginot Line and if it severed the flow of iron ore to German industry, so much the better. The British would bear the major burden at sea while a couple of thousand troops, mostly Foreign Legionnaires, could be used to demonstrate the French government's resolve and initiative. Admiral Auphan later wrote, 'it's a little cynical to say so, but no one really expected to stop the Soviet army and save Finland. The idea was to use the pretext of such an operation to lay our hands on the Swedish Iron-ore, and thus deny it to Germany.'

Prime Minister Edouard Daladier advocated a rapid execution. The Norwegians had had their warning in January and could simply be ignored, he argued in a memorandum to Halifax on 22 February. Through 'a swift

occupation of the main Norwegian ports and landing of an expeditionary force', the Swedes would see that the Allies were serious in their intentions and agree to the transit of troops. Should the Swedes not concur, the German ore traffic would still have been severed. Bases on the Norwegian coast would be useful for offensive actions against Germany and would surely provoke countermeasures.[15]

In spite of having decided to the contrary only the day before, the British War Cabinet gave in to French pressure and agreed in the afternoon of 1 March to submit a note to Oslo and Stockholm, requesting permission to send relief forces to Finland over Narvik and Kiruna–Gällivare. When the request was discussed by the Norwegian government, there were voices in favour of the Allied demands to help Finland, but Prime Minister Nygaardsvold firmly stated that as long as he was prime minister, 'Norway would not voluntarily join the war.' There was an underlying agreement, though, that if the Allies did come, it would be vital not to end up in an open fight with British or French soldiers, driving Norway onto the 'wrong side' of the conflict. An attempt was made to coordinate the official answer with Stockholm, but the Swedish government rejected the Allied request categorically on the 3rd and the Norwegian reply followed the next morning.[16]

A week of quiescence followed until, on 11 March, the French Ambassador Corbin told Foreign Minister Halifax that Prime Minister Daladier would have to consider resigning unless the issue of aid to Finland was decided on positively very soon. In the evening of that day, the British War Cabinet gave in to French pressure once again and agreed to land troops in Narvik, even without Norwegian consent.[17]

Suddenly, there was a new realism to the project. Major General Mackesy, C-in-C of 49th Division, was confirmed as overall land commander and Admiral Edward Evans in charge of the naval operations, known as Plan R3.[18] General Audet was to be in charge of the Corps

Expéditionnaire Français en Scandinavie. The British commanders were informed in a meeting with ministers and CoS on 12 March that their objectives were to establish a force at Narvik and render assistance to Finland, while ensuring that the 'North Swedish ore fields were denied to Germany and Russia for the longest possible period'. The Norwegian reaction was uncertain, they were told, and the War Cabinet only wished the force to land 'provided it could do so without serious fighting'. A mere show of resistance or minor opposition could be accepted, even if it involved casualties; on the other hand, they were only to use force 'as an ultimate measure of self-defence should their forces be in jeopardy'. How to recognise a 'mere show of resistance' from serious opposition was not detailed.[19]

The realisation in the War Cabinet of what was about to happen created confusion and inconclusive orders. Several largely untrained British divisions were about to be committed to an invasion of neutral Norway and, if not halted in time, Sweden as well. The prospect of Allied troops actually reaching Finland was feeble, whereas the operation had all the prospects of becoming a dismal failure by having to turn back in the face of Norwegian resistance or, worse, a quagmire of growing liability. What would happen when the first ships reached Narvik would to a large extent depend on the reactions of the local Norwegian commanders and the Allied commanders' interpretation of their intentions. A German retaliation could easily create an escalation beyond Allied capacity. The British prime minister and his Cabinet had lost control of events due to constant French pressure and a military machine that worked steadily on its own.

During the 12th, the War Cabinet decided that only the Narvik landings of operation Avonmouth should be initiated in the first phase, securing the railway as quickly as possible. Only if this went satisfactorily would they be followed by those at Trondheim. The troops for Bergen and Stavanger were to be held ready but not dispatched until further decisions by the Cabinet. A

decision to cross the Swedish border and occupy the Lapland ore fields would be taken even later and only then would Finland be considered.[20]

In the early morning of 13 March, the embarkation of the Allied expeditionary force for Narvik began. A few hours later the news of the ceasefire in Finland broke. The British War Cabinet met at 11:30 and Chamberlain's relief must have been enormous when he could conclude that the situation had changed completely. The expedition was cancelled and the soldiers ordered to disembark and stand down. Churchill and Ironside argued that the primary goal of the expedition, the Swedish ore fields, remained, and urged that the Narvik landings at least should still go ahead – to no avail. The majority of the Operation Avonmouth troops were disbanded and sent to France, while the Chasseurs Alpins returned to the billets. The French warships and transports were released and sent to the Mediterranean for other missions. The British cruisers were sent back to the Northern Patrol.[21]

In Britain, the ceasefire in Finland created a fear of increased German influence in Scandinavia even if relief at not becoming entangled in a distant war prevailed. Churchill, having quickly regained his spirits, continued to argue for offensive operations against Germany and even suggested they should 'send an aircraft carrier up the Norwegian coast, from which aircraft could lay mines in the approaches to Luleå and bombard the ships in that port'.[22]

In France, there was regret that the Winter War was over and that the Daladier government had been unable to help or at least take advantage of the situation and establish an alternative front to distract German aggression. On 19 March, in spite of arguing that the situation for an initiative in Scandinavia was actually better now that the risk of political complications with the Russians had gone, Daladier lost a vote in the parliament and his government fell. The new government, formed two days later, was led by the sixty-two-year-old Paul Reynaud.

Operation Weserübung

Alarmed by reports that an Allied intervention in Finland through Norway and Sweden was imminent, Hitler decided on 3 March that Germany would have to act ‘quickly and decisively’ in Norway as Weserübung would have to be initiated before the attack on France. He demanded all preparations for the invasion to be completed by the 10th and the operation ready to start on four days’ notice after that. For all practical purposes, the decision to invade Denmark and Norway was taken on this day. ‘Full speed ahead for Operation Weserübung’, General Halder noted in his diary.[23]

On 5 March, Hitler for the first time discussed Weserübung with all three service commanders present. Two days later, he declared the disposition of forces as suggested by von Falkenhorst to be final and no longer subject to change. The first operation orders were issued by von Falkenhorst on the same day, followed by detailed orders from the SKL to Group West and East a week later.

Weserübung would be the first combined operation ever where air force, army and navy operated closely together with interlinked tasks and objectives. Substantial forces were to be transported directly into battle simultaneously by aircraft and warship, and success required seamless cooperation between the three normally rival services and strict adherence to a complicated schedule. Regimental-strength landings were to be made at Narvik, Trondheim, Bergen and Kristiansand while one company was considered sufficient at Egersund and Arendal, where there were important wireless stations to secure. The equivalent of two regiments would head for Oslo in the first wave plus critical support functions. Parts of the Oslo force would also secure the naval base at Horten on the way up the fjord. Fornebu airport outside Oslo and Sola airport outside Stavanger were to be captured in airlift operations spearheaded by paratroops in airborne assaults. Around 8,850 men would be on board the navy ships in the first attack wave and transport ships would carry an additional 3,900 men, 742 horses, 942

vehicles and 4 tanks. The airborne contingent would be 3,000–3,500 men. Few of these were paratroopers and the aircraft were supposed to land with the troops on board on captured airfields. Thereafter the transport aircraft would be used in a continuous airlift operation as long as necessary.[24]

To limit the exposure of the first echelon to Allied intervention, warships would be used for transport, involving almost the entire Kriegsmarine one way or another. The warships could not carry the heavy equipment, guns and other necessary supplies to sustain the invaders, and fuel would be needed both for the return of the smaller ships and for aircraft operating at or near the invasion ports. A carefully timed operation of supplementary, slower-moving merchant vessels and tankers was therefore set up to arrive individually at the invasion ports during the first day.[25] As these ships would have to leave German ports several days ahead of the naval ships and would partly travel through Norwegian waters without other protection than camouflage, many of the senior naval officers were concerned that the transports would constitute a serious security risk – above all, as many of them would carry guns and soldiers in uniform. The SKL war diary stated that the operation 'broke all the rules in the book of sea warfare' – but also called the operation 'one of the more creative operations of the modern history of war'. Admiral Carls held that the operation called for 'resolute commitment' but also warned that unless luck played a significant role, losses of up to half of the ships would have to be expected.[26]

In a status meeting with Hitler and von Falkenhorst on 9 March, Admiral Raeder claimed that in his opinion the current development of the situation in Finland made Operation Weserübung 'urgently necessary'. If the Allies were to use the pretext of helping Finland, as all intelligence indicated they were, they would certainly occupy Norway and Sweden en route, severing the supply of iron ore and establishing offensive bases. It was his duty to point out that the operation contradicted 'all principles of

naval warfare, following which it should only be attempted if we possess the necessary dominance at sea, which was not the case'. On the contrary, the operation would have to be carried out in the face of the superior British fleet and, should the invasion fleet be expected and the Royal Navy be at sea, disaster and grievous losses would be the result. The utmost security would have to be enforced.[27]

On 10 March, the SKL noted in the war diary that 'the totality of the reports point in a compelling manner towards the possibility of immediate, significant action by the Allies in Norway.' German radio intercepts during 13 March tracked no fewer than thirteen British submarines in the North Sea and the entrance to Skagerrak, with two more under way from Rosyth. This was more than twice the usual number in the area and a clear signal to the SKL that something was about to happen.

It was already known from Moscow that Finland had capitulated that same morning, though, and it was decided not to act upon this intelligence for the time being, other than to alert those U-boats in the area to be extra vigilant. *U31, U43, U44* and *U65* were ordered to assemble outside Bergen and Stavanger – as these were considered the most likely harbours to be entered – and attack any warship or transport they might encounter. It was expected that the news from Finland would remove the pretext of an intervention and most likely affect the decision to invade Norway, which appeared to have been taken. On the 15th, further intercepted signals ordering the submarines to disperse and the cruiser squadrons to stand down, revealed that the Soviet–Finnish ceasefire indeed had upset the Allied plan. The OKW concluded correctly that with the pretext for an expedition to Scandinavia gone, the Allies had shelved their operation against Norway – for now.[28]

Raeder in Wilhelmshaven in March 1940 with Konteradmiral Friedrich-Wilhelm Fleischer, Coastal Commander of Ostfriesland. It is not unlikely that Operation Weserübung was high on their agenda. The tall man to the right is Oberleutnant Freese, Raeder's adjutant at the time. (Author's collection)

In a meeting with Hitler on 26 March, Raeder concluded that a British operation against Norway had been in its concluding stages when halted by the Finnish–Russian ceasefire. He added that, even if the imminent danger of such an operation had been significantly reduced, the ultimate objective of the Allies to sever the iron ore supplies remained. Germany still faced the issue of having to carry out Operation Weserübung – and therefore it should be initiated in the next new moon period – that is, no later than 15 April. Everything was ready, but the dark nights needed to maintain security during the transfer were rapidly shortening. Hitler agreed and ordered the preparations for Operation Weserübung to be completed as planned, in spite of the OKW's reassurance that the danger of an Allied intervention in Norway was over.[29]

Wilfred and Plan R4

In London on 28 March, at the first meeting of the Supreme War Council after Reynaud took over, Chamberlain presented Operation Royal Marine, the laying of floating mines in the Rhine to disrupt waterborne commercial traffic. The French were sceptical, but after some bargaining agreed to consider the operation – provided it was tied to a simultaneous mining of the Norwegian Leads. By 1 April, a diplomatic warning would be submitted to Norway and Sweden, stating that the Allies reserved the right to stop the German iron ore traffic. Four to five days later, mines would be laid at selected stretches of the Leads, supplemented by 'operations against German shipping'. Simultaneously, mines would be dropped in several German rivers and waterways.[30]

British decisions at this stage become somewhat ambiguous. Landings in Norway had not been mentioned in the meeting at all, but Churchill and the CoS saw an opportunity. General Ironside and General Gamelin talked together after the meeting and, the next day, the British War Cabinet almost casually added 'a British brigade and a French contingent' to be 'sent to

Narvik to clear the port and advance to the Swedish frontier in case of German countermeasures to the mining'. Admiral Darlan also saw an opportunity to meet, and crush, a German fleet reacting to the mine-laying. To ensure the provocation would be sufficient to bring the Germans out, he believed a landing in Narvik was necessary and sent a signal from London ordering all French forces assigned to the Scandinavian operation to be reassembled forthwith. Meanwhile, initiatives were taken by the British War Office to try to reassemble as much as possible of the now dispersed Operation Stratford and Avonmouth forces. Two separate but linked operations targeting Norway were thus being prepared: the minelaying – Operation Wilfred – and a landing of Allied soldiers in Norway – Plan R4.[31]

The laying of mines did not require Norwegian consent, and thus, when the landings were added so casually, the Allied politicians lost the political safety-valve of being able to delay the operation from lack of Scandinavian cooperation which had previously been an absolute prerequisite. Chamberlain and Halifax had lost control of events again. This time, they would not retrieve it. In the early morning of 31 March, Vice Admiral Cunningham of 1st Cruiser Squadron was notified by the Admiralty that Plan R4 would be 'put into operation [and] also Stratford, probably 3rd April'.[32]

Operation Wilfred called for mines to be laid in the approaches to Vestfjorden north of Bodø, and off Stadlandet south of Ålesund. A third area off Bud between Molde and Kristiansund would be declared dangerous, but no mines would be laid there. German ships moving outside Norwegian territory because of the mines should be seized immediately. Neutral ships were to be inspected and sent to Kirkwall if necessary. Norwegian coastal traffic should be warned of the mines, but otherwise left alone. A note to the Norwegian government several days in advance should justify the actions in a general way, arguing that Norway was unable to

protect its neutrality. It was expected and even hoped that Wilfred would provoke a German counteraction through Sweden or eastern Norway. German naval actions north of Stavanger were considered unlikely. Plan R4 would from a political point of view be activated if the Germans took the bait and 'set foot on Norwegian soil, or there is clear evidence that they intend to do so'.[33] An increased intelligence effort to detect any German countermoves would be initiated, even if it was recognised that this might not be so easy. From a military point of view, it appears that Plan R4, based on the old Stratford and Avonmouth concepts, would go ahead without waiting for the Germans. Having the troops ready on board the ships for an unspecified period, waiting for German actions, would not be possible. The action was aimed at stopping the ore traffic from Narvik, and this the minefields could not do.

When the Allies had landed at Narvik, the town and railway to the Swedish border would be occupied by an infantry brigade subsequently reinforced up to a total of eighteen thousand men. The actual decision to cross the border to Sweden would be taken at a later stage. Another five battalions would subsequently occupy Trondheim, Bergen and Stavanger. It was proposed to commence Operation Royal Marine on 4 April and Operation Wilfred the following day. Plan R4 would then follow if Hitler took the bait.[34]

Reynaud, who felt that agreeing to mine the German waterways was but a 'minor concession' compared to finally swaying the British Cabinet into offensive actions in Scandinavia, went home to discuss the plans with his War Committee – *Le Comité de Guerre Français*. The French War Committee, which was under the influence of the previous prime minister, Daladier, strongly supported the actions in Norway but rejected any execution of Operation Royal Marine and Reynaud had to inform London accordingly on the 31st. Chamberlain was frustrated and told French Ambassador Corbin, 'no mines, no Narvik'. Both operations were

postponed. Chamberlain was acutely aware, though, that a line had been crossed and ‘matters had now gone too far for us not to take action,’ even if the French refusal of Royal Marine had stalled the momentum.[35]

On 3 April, Chamberlain asked Churchill to go to Paris to try to persuade the French to accept Royal Marine so that the Norwegian operation could proceed as well. Reports of German troop-transports taking to sea indicated something was going on. Churchill apparently did not push the river-mining plan too hard but urged the mining of the Norwegian Leads instead. There was no opposition to this in Paris, and the First Lord reported back to Halifax on the 5th that the French may be ‘right in wanting to postpone the minelaying of the Rhine until the French Air Force was strong enough to meet German retaliation’. Reynaud needed some room to manoeuvre and, to avoid a renewed political crisis in Paris, the British Cabinet agreed to ‘proceed with the Norwegian plans’ and set the date for Operation Wilfred to commence in the morning of 8 April.[36]

The troops for the Narvik part of Plan R4 were readied at the Clyde. The first battalion for Narvik would sail in transports escorted by the cruisers *Penelope* and *Aurora* with Admiral Evans and Major General Mackesy on board the latter. They were to be embarked and ready to leave the Clyde in the morning of 8 April. Within a few days, the remainder of the contingent, including French troops, would follow, building an independent force with a total strength of some eighteen thousand men. An advance into Sweden would be contemplated at a later stage. If the troops had to withdraw, the ore-loading facilities should be destroyed. Two strict conditions were set out for the conduct of the expedition: no landings would be considered against serious Norwegian opposition, and the bombing of civilians in the course of land, sea or air operations should be avoided.[37]

Two battalions each for Bergen and Stavanger were to sail from Rosyth in the cruisers of 1st Cruiser Squadron – *Devonshire, Berwick, York* and *Glasgow* – under the command of Vice Admiral John Cunningham.[38] There

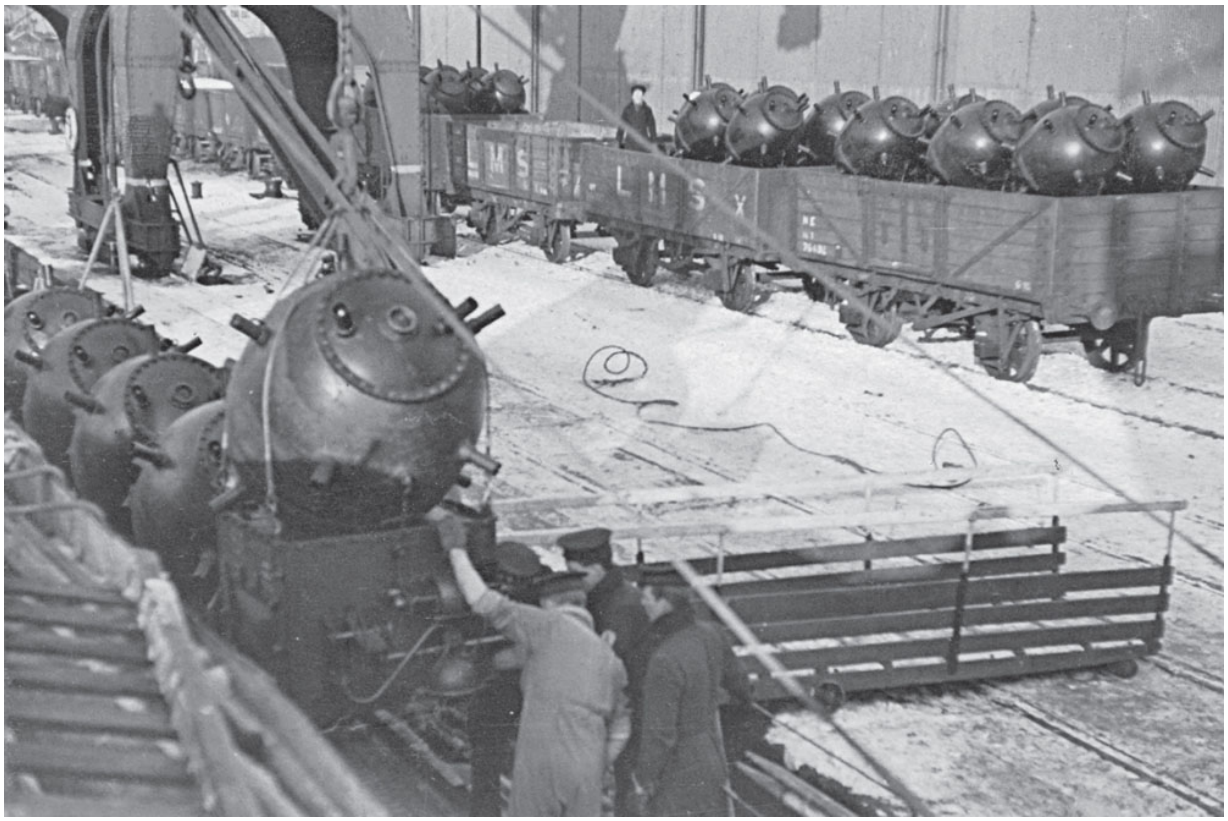
was a reasonable assumption that these forces would be able to forestall a potential German landing until adequately reinforced even if they were short of A/A defences. This force was also to be ready to leave in the morning of the 8th. A single battalion for Trondheim would follow in a transport two days later. Cruisers of 2nd and 18th Cruiser Squadrons not directly engaged in the operation were to be kept ready as a striking force at Rosyth and Scapa Flow, respectively, in addition to the Home Fleet 'to deal with any sea-borne expeditions the Germans may send against Norway'.[39]

During the study of these events one is surprised by the British planners and their willingness to engage in complicated and far-reaching operations with so little elementary knowledge of things Norwegian. Moving a rather lightly equipped force from Narvik to Kiruna against determined opposition would be a serious challenge. No roads existed into the mountains except for the single-track railway; there would be no airborne support and only a few A/A guns. In short, Operations Wilfred and R4 must be characterised as little more than hazardous – at best. Churchill might have considered Wilfred 'small and insignificant' and mine-laying in the Leads a 'technical infringement', but there is not the slightest doubt that the operation from every legal and moral standpoint was a flagrant violation of Norwegian neutrality. That the Allied landing forces were meant to land after a German reaction had been recognised does not make the provocation to initiate this deliberate chain of events any more acceptable.

— 25 —
Storm Warning

Departures

HITLER SOON BROUGHT OPERATION Weserübung back on track – all the more so as continued intelligence indicated that an Allied intervention in Norway had only been postponed, amply fuelled by the British and French press.[1] It was known that the Home Fleet had returned to Scapa Flow in early March and signal intelligence indicated a substantial strengthening of the fleet by several new cruisers and destroyer flotillas. This was taken to indicate that something was being prepared for, most likely in the north.



Mines intended for Vestfjorden being loaded onto British destroyers (D Briggs collection)

On 20 March, von Falkenhorst informed Hitler that all planning and preparation was completed and Weserübung could be initiated whenever he decided. Ten days later, on 1 April, a five-hour, detailed review of the operation was staged in the Chancellery, after which everything was formally approved by Hitler. The following day, he asked for assurance from Raeder, Göring, Keitel and von Falkenhorst that all preparations were completed and that neither ice nor weather in general would create adverse conditions. This they confirmed, and Hitler decided the invasion should commence on 9 April. The first supply ships would be at sea in less than forty-eight hours. At 19:17 on 2 April a signal was sent from the SKL to Groups East and West, C-in-C U-boats and the Fleet Command: '*Wesertag ist der 9. April*.' Operation Weserübung was being implemented.[2]

So too was Operation Wilfred, the British mine-laying in Norwegian territorial waters. In the morning of 5 April, Commander Robert King-Harman took the minelayer *Teviot Bank* to sea from Scapa Flow. Escorted by destroyers *Inglefield, Isis, Imogen* and *Ilex*, this made up Force WS, heading for Stadtlandet to lay the southernmost of the two real Wilfred minefields.

Later that same day, Vice Admiral Commanding Battlecruiser Squadron William 'Jock' Whitworth took to sea from Scapa Flow on board *Renown*, screened by the destroyers *Greyhound, Glowworm, Hero* and *Hyperion*. The intention was to meet up with *Birmingham, Fearless* and *Hostile* hunting German fishing vessels off Lofoten in the evening of the 7th. British intelligence believed there were several Norwegian naval ships at Narvik and it was hoped the presence of a deterrent force might prevent a confrontation with the minelayers.

In the morning of the 6th, Captain Jack Bickford of the 20th Destroyer Flotilla fell in with his four mine-laying destroyers *Esk*, *Ivanhoe, Icarus* and *Impulsive* (Force WV), carrying sixty mines each for the Vestfjorden minefield, escorted by *Hardy, Hunter, Havock* and *Hotspur* of the 2nd

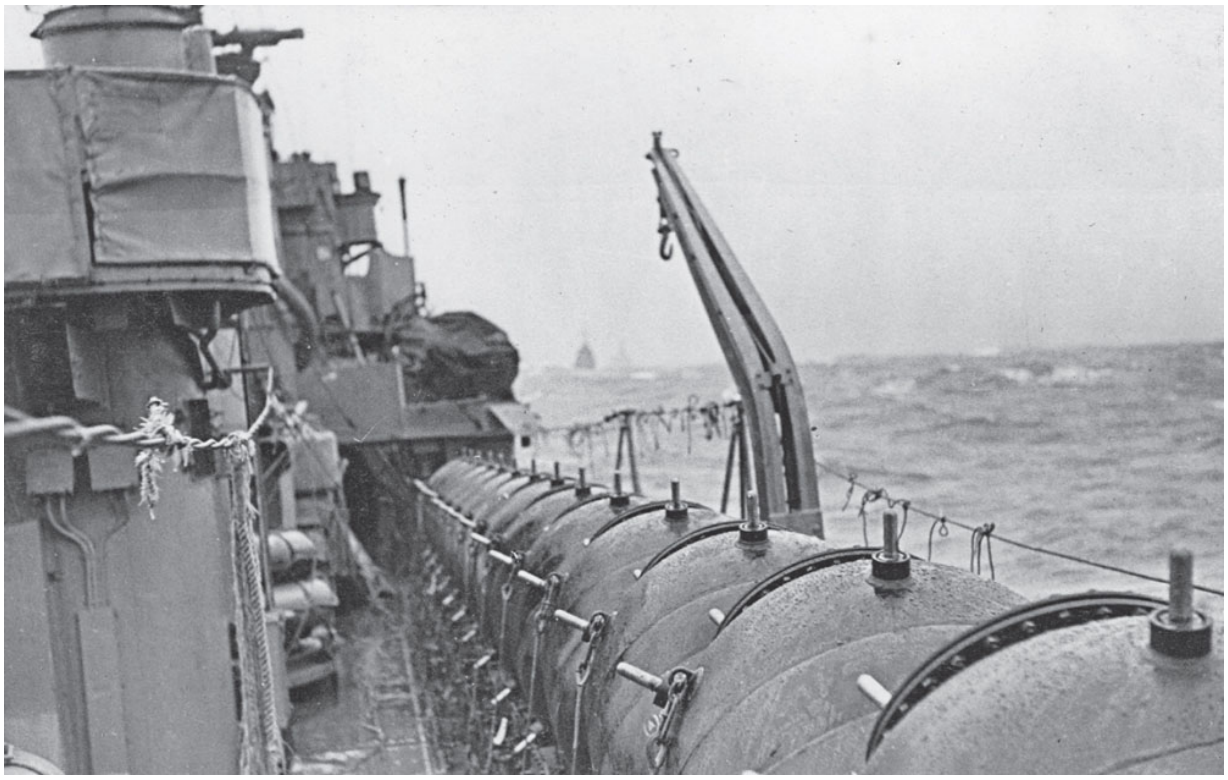
Destroyer Flotilla under the command of Captain (D)2, Bernard Warburton-Lee.

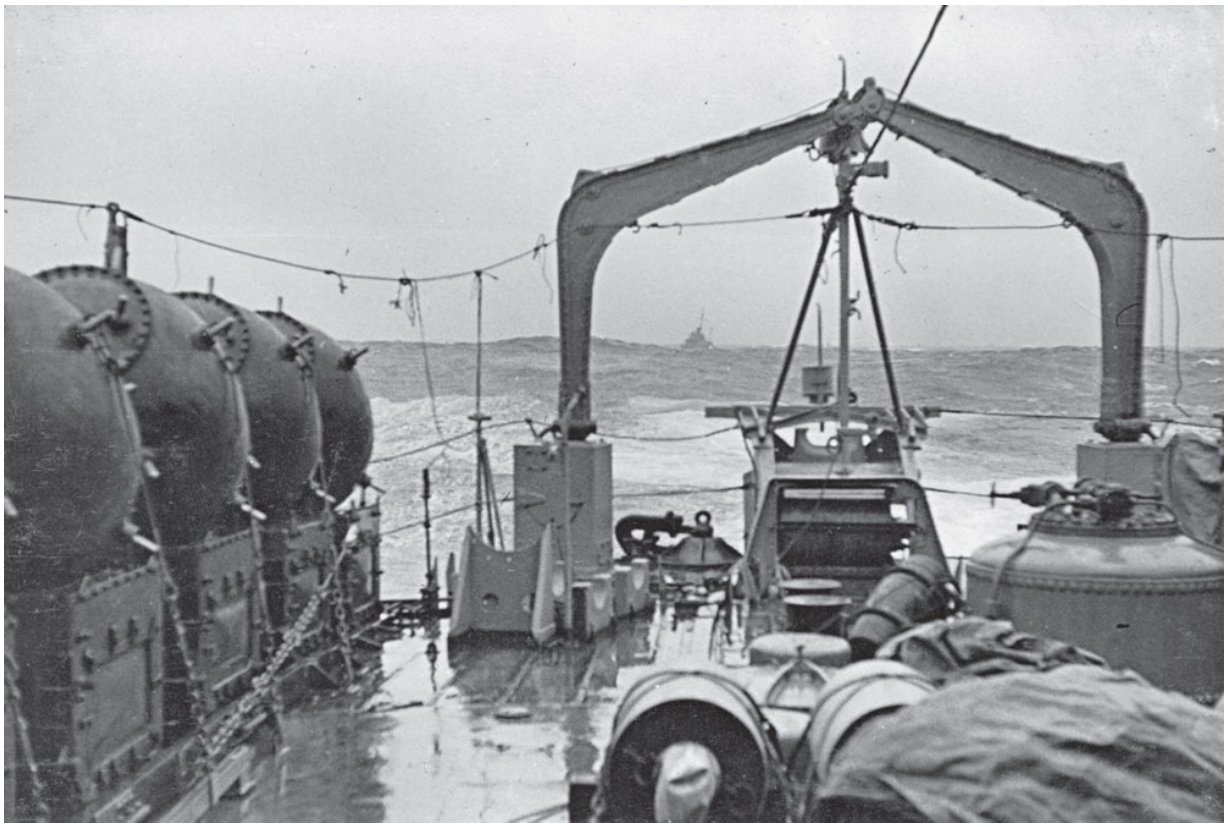
In view of the potential situation that might arise from swift German reaction to the mine-laying, it is difficult to understand why the Admiralty did not order at least parts of the Home Fleet to sea at this stage. From a central position north of the Bergen–Shetland Narrows, both mine-laying operations could have been covered against German reactions without exposing the ships unduly to the Luftwaffe.[3]

In the early morning of 6 April, Lieutenant Commander Gerard Roope of *Glowworm* reported losing a man overboard, asking for permission to search for him in spite of the worsening weather. Permission was given and *Glowworm* turned back, rapidly losing sight of *Renown* and the rest of the destroyers. After several hours of futile searching, Roope decided there was no hope of finding the sailor and steered to where he reckoned Vice Admiral Whitworth would be at the time. All ships being under strict radio silence, finding the flagship turned out to be an impossible task in the appalling weather. Eventually, Roope realised he had lost touch and turned back towards Scapa Flow to receive new orders.

Hyperion and *Hero* had had no time to fuel before departure and, running low on oil, they were sent back to Sullom Voe for refuelling when the minelayers had joined up. Admiral Whitworth expected *Glowworm* to catch up and counted on his screen to have been enhanced by *Birmingham* and consorts by the time the mine-laying force would have to be detached. *Hyperion* and *Hero* were instructed to look for *Glowworm* and give her an update on *Renown*'s last position, should they come upon her. Meanwhile though, *Glowworm* had come close enough to Scapa Flow for Lieutenant Commander Roope to break radio silence and ask for orders. At 11:43 on 6 April, a signal was received from C-in-C Home Fleet with *Renown*'s estimated position and orders to turn back and look for her. During the evening, a supplementary signal was also received from *Renown* with her

anticipated position next morning, while *Birmingham* received instructions for a rendezvous off Vestfjorden in the evening of the 7th.[4]





Two photos taken from *Ivanhoe*, showing the mine-laying destroyers heading north on 7 April. (D Briggs collection)

Ships of 1.Seetransportstaffel, the first ships to enter the key ports of Norway once they had been secured, taking on board supplies and soldiers in Stettin in early April 1940. (Author’s collection)

The first German transport ships, *Rauenfels, Bärenfels* and *Alster*, destined for Narvik, departed Brunsbüttel at 02:00 in the morning of 3 April. In the afternoon, the tanker *Kattegat* followed. Over the next several days, the freighters *Main, Sao Paolo, Levante* and the tanker *Skagerrak* departed for Trondheim, followed by *Roda* for Stavanger. Some fifteen other vessels departed Lübeck and Stettin heading for the southern Weserübung ports, packed with soldiers, provisions and heavy military equipment. At Basis Nord, the German supply base near Murmansk, the 12,000-ton tanker *Jan Wellem* received orders to leave during the evening of 6 April and relocate to Narvik, where further orders would be received from the German consul. In the morning of the 7th a further eleven ships left Gotenhafen, scheduled to arrive in Oslo in the days following the invasion. None of the vessels except *Jan Wellem* was to enter Norwegian ports prior to Weser-day – the day of executing Weserübung.

It appears that Berlin had limited information of the preparations for Operation Wilfred and Plan R4, but there is no question that the Germans knew something was being planned based on the increased amount of signals intercepted.[5] Due to improved signal discipline, the B-Dienst had problems tracking the British submarines compared to a few weeks earlier and was largely unaware of their number and whereabouts. Except for *Trident*, which already had stopped and examined several neutral merchant ships off Lista on the 4th and 5th, and *Unity*, which had made an unsuccessful attack on a U-boat in the Heligoland Bight on the 5th, there had been few indications of where the submarines were lurking. Based on the amount of land-based radio traffic, however, the B-Dienst estimated that some fifteen to twenty submarines were at sea. This worried the SKL. It might indicate that the Admiralty was aware of Operation Weserübung and preparing a trap, or it might be a defensive measure for an Allied operation against Norway, as in March. Whatever the reason, the submarine alert was

heightened and preparations for increased air and sea protection of the transfer convoys were initiated.[6]

Kapitän zur See Hellmuth Heye of the cruiser *Admiral Hipper* was in charge of Group II, the warships heading for Trondheim. (Author's collection)

Kapitän zur See Hellmuth Heye, captain of the heavy cruiser *Admiral Hipper*, was in charge of Group II, the warships for Trondheim. Assigned to Group II were the destroyers of the 2nd Destroyer Flotilla: *Paul Jacobi, Theodor Riedel, Bruno Heinemann* and *Friedrich Eckholdt* under the command of Fregattenkapitän Rudolf von Pufendorf on board *Jacobi*.[7] During the afternoon of 6 April, the embarkation of soldiers commenced. The troop trains were shunted into the closed-off Amerika-Kai, and 1st and 3rd Battalion of the 138th Mountain Regiment, a pioneer unit, a battery of mountain artillery as well as regimental staff, intelligence and communication personnel, naval artillerymen and antiaircraft gunners, climbed the gangways: 1,700 men in all – 900 on board *Hipper* and 200 on board each destroyer.[8]

The commander of the 138th Mountain Regiment, Oberst Weiss, was welcomed on board *Hipper* by Heye, but he would have no say in the operation until back on dry land in Trondheim. Heye was very careful that all explosives, ammunition, fuel and other dangerous items were stored below the armoured deck. Extra space was made in the magazines by storing as much as possible of the ammunition for the ship's guns in the ready-lockers on deck. Explosives that could not be stored below deck were spread throughout the ship in small crates and boxes to minimise the risk posed by incoming fire. The troops were confined below deck with orders to remain there until permission to come on deck was given. On Heye's insistence, every soldier, few of whom had ever been on board a ship before, was issued with a personal lifebelt. The medical staffs of the cruiser were ordered to prepare as much as possible to assist the soldiers in fighting the inevitable seasickness.

The cruiser was ready at 22:00 and cast off while the tide was still high, waiting at anchor in the River Elbe for the *Zerstörer*. Some hours later, the destroyers joined and at 01:30 the five ships commenced navigating the narrow channel towards the sea. Shortly after passing the river mouth,

Eckholdt reported overheating in the port propeller shaft and had to slow down. She was left behind with *Riedel* and ordered to initiate transfer of her troops to the backup destroyer unless the problem could be repaired in time for her to rejoin the fleet during the morning. *Hipper* and the remaining destroyers continued westward towards the Schillig-Reede off Wilhelmshaven to join Group I. From this time onwards, until at anchor in Trondheim, the crew of *Hipper* would be at their stations – for reasons of battle readiness, but also to make room below deck. To make their stay as comfortable as possible, the sailors had brought their hammocks, additional clothing and mess gear to their stations. Secrecy had been absolute, and very few on board knew what was happening and where they were heading.[9]

Nine hundred men, largely from the 138th Mountain Regiment, boarded *Hipper*. The destroyers for Trondheim and Narvik had two hundred men each. (Author's collection)

The ships of Group I for Narvik assembled in Wesermünde during the first week of April.[10] The group consisted of the ten destroyers *Wilhelm Heidkamp, Erich Koellner, Wolfgang Zenker, Georg Thiele, Bernd von Arnim, Hermann Künne, Erich Giese, Anton Schmitt, Hans Lüdemann* and *Dieter von Roeder*, with C-in-C Destroyers Kapitän zur See Friedrich Bonte on board *Heidkamp*. He would be subordinated to Vizeadmiral Lütjens at first and when detached report to Admiral Saalwächter at Group West in Wilhelmshaven. The commander of the landing troops was Generalmajor Eduard Dietl, also on board *Heidkamp*. From Wesermünde to Narvik is more than 1,100 sea miles or almost 2,000 kilometres. Maintaining a constant speed of over 20 knots to reach the target at the designated time would put a severe strain on ships and men.

By midday on the 6th, Wesermünde harbour was closed off and embarkation of the men from 139th Mountain Regiment commenced in the early evening – 200 men to each ship. Later they were joined by small units of naval gunners, propaganda staff and intelligence personnel, arriving in covered trucks. Very few knew what was going on. Nobody mentioned Narvik. By 23:00 the destroyers were moving down the channel from Wesermünde towards Heligoland Bight.

Kapitän zur See August 'Curry' Thiele had in early March received orders to prepare the heavy cruiser *Lützow* for a raid into the South Atlantic. In late March, she lay fully stored and fuelled in Wilhelmshaven, waiting for a suitable combination of moon phase and weather to depart, when Hitler decided *Lützow* should take part in Weserübung, accompanying Group II to Trondheim. There, she should land some 450 troops at Stjørdal before slipping into the Atlantic in the expected melee, covered by the battleships *Scharnhorst* and *Gneisenau*.

At 15:00 on the 6th, only a few hours before departure, Group West was informed that cracks had been discovered in the base of *Lützow*'s auxiliary motor No. 1. The cracks could be temporarily welded but she would be

unable to exceed 23 knots. An Atlantic breakout was out of the question without dockyard repairs, as was a passage through the Bergen–Shetland Narrows, and at 17:00 on the 6th, Raeder reassigned *Lützow* to Group V for Oslo, where she would be less exposed. To catch up with the new assignment, Thiele had to depart immediately and in the small hours of the 7th, *Lützow* cast off, heading for Kiel through the Kaiser Wilhelm Canal.[11]

Scharnhorst and *Gneisenau* weighed anchor from Wilhelmshaven at 00:45 on 7 April. After clearing the river mouth, course was set for Lightship F. The battleships would act as cover for Groups I and II and carried no troops. Following the decision conference in the Chancellery on 1 April, where all the group commanders had met, a discussion had been initiated over how best to deploy the battleships. Arguments were put forward that it might be better to send the destroyers alone to Narvik and keep the battleships south of the Bergen–Shetland Narrows in order not to draw the attention of the British fleet to Weserübung too early. Others suggested letting the heavy units move out with Group III for Bergen and remain in the North Sea so that the Home Fleet, when alerted, would concentrate on them and leave the invasion groups alone. The SKL eventually decided *Scharnhorst* and *Gneisenau* would be best employed in support of the groups for Narvik and Trondheim. Loaded with troops and stores, the destroyers would need protection against even light opposition. Should British cruisers meet with the battleships, so much the better, as this would mean a certain German victory. Holding the battleships back in the North Sea would increase the chances of encountering superior British forces – something to be avoided at all costs. The risk of alerting the Allies to Operation Weserübung two days before its implementation by allowing the battleships to take to sea was worth taking. Should they be sighted, it was even possible that the Admiralty would conclude that another Atlantic breakout was being attempted and concentrate its forces between Iceland and Shetland, which would be an advantage for Group III, following

behind. For Acting Fleet Commander Lütjens on board *Gneisenau* this would be a unique chance to show his abilities at sea.

Reaching Lightship F at 03:00, the battleships were joined by Kommodore Bonte and his ten *Zerstörer* and, not long after, the compact shadows of *Hipper* with two more destroyers could be distinguished. A few signals were received and acknowledged from darkened lamps and the newcomers fell in. The most powerful fleet the German Navy had mustered in over twenty years headed northwards at 22 knots.[12]

'No disturbing news', wrote General Jodl in his diary.[13]

Dawn on Sunday 7 April found the fleet in calm seas between the Danish peninsula of Jutland and the German Westwall minefield. 'Daylight formation' was ordered at 05:50 and the destroyers spread out in front of and around the larger ships steaming abreast, some 2,200 yards apart. Speed was increased to 23 knots. *Eckholdt* and *Riedel* rejoined the fleet during the morning, reporting everything in order.[14] The soldiers were allowed on deck in the sunshine and marvelled at the ships and the sea. The sea was exceptionally calm and few paid much attention to the ominous advice given over the tannoys on how to avoid seasickness. Everybody listened very carefully, though, when it was announced that their target was Narvik in northern Norway, to be reached at dawn on 9 April. Few had any idea where this was, and a scramble for maps ensued.

Vizeadmiral Lütjens was worried about the calm weather and good visibility increasing the risk of being sighted. British reconnaissance over Wilhelmshaven the previous afternoon had found the battleships and several cruisers in harbour and their departure during the night had been unnoticed. At 11:31, Group West informed Lütjens that some two hours earlier a British air reconnaissance report had been intercepted, mentioning 'one cruiser and six destroyers with eight aircraft on course 350º at 55º 30' N, 07º 37' E'. Luftwaffe fighters ahead of the fleet had chased off two Hudsons during the morning, but not before some of the ships had been observed.

Subsequent signals from Group West reported (correctly) that most of the heavy ships of the Home Fleet were in port or far to the south, and there appeared no imminent threat to the operation. Still, Lütjens ordered an increase of speed to 25 knots at 12:13 and an hour later to 27 knots in order to get into the overcast reported ahead.[15]

At 14:20, off northern Jutland, the alarm was sounded and the soldiers rushed below decks. Twelve Blenheims of 107 Squadron approached from cloud bands in the east in groups of three at about 6,500 feet. *Hipper* was easternmost in the line-abreast and received most of the attention. Dense flak kept the Blenheims at a respectful height and the forty-five 275-pound bombs dropped hit the water well away from the ships, making little impression on the Germans.[16] Action stations were stood down after less than half an hour, even if most ships kept the crews at their guns. A signal from one of the aircraft, intercepted by *Gneisenau*'s B-Dienst, read 'three battleships steering north accompanied by destroyers', and Lütjens took it for granted that the British now knew that a large German force was at sea. It was later confirmed by Group West that the Admiralty believed at least one *Scharnhorst-class* battleship was at sea. Increased signal traffic to and within the Home Fleet was registered, as was the departure of at least one cruiser squadron, but Group West – and Lütjens – remained unaware that British capital ships took to sea during the 7th. At 22:05, the SKL announced that they believed 'the enemy has now recognised a northward directed operation and will initiate countermeasures.'[17]

During the afternoon, a strong low-pressure weather system moved in from the Atlantic as predicted by the German meteorologists and the fine weather gave way to low clouds and showers.[18] Visibility was reduced to less than a mile and the sea started to grow under a mounting gale from south-south-west. Towards midnight the wind reached force 8 to 9 and a heavy swell from aft developed. The destroyers were ordered to leave their antisubmarine stations and form two lines en-échelon to port behind the

battleships, preparing for heavy weather. This formation would give the larger ships room to manoeuvre and open fire should an attack develop during the night. Lütjens wanted to be well north of Trondheim by dawn and speed was set at 26 knots. All doors and hatches were battened shut and traffic on deck was restricted. The German destroyers, never known for their sea-keeping abilities, began to feel the effects of the stern waves quite badly. The following sea gave the Type 34 *Zerstörer* weather helm, turning them port broadside on to the sea. The helmsmen worked hard, trying to maintain course and position and often had to be assisted by engine manoeuvring. The Type 36 *Zerstörer* fared somewhat better, but on board these, too, conditions became quite appalling. Pitching and rolling with a tireless malice, the bows dug deep into the seas, throwing tons of water over the low forecastle and open bridge, where everyone was soaked to the bones. As the storm increased, there was a real danger that the bow might actually cut under, and radical course and speed alterations became necessary, straining bridge and engine personnel to the limits. In the engine and boiler rooms, water was coming through the ventilator intakes, adding to steam leaking from flanges and connections. Damage and technical defects developed and as lighting circuits often tripped out, repairs had to be carried out in semi-darkness or aided by unsteady torches. In particular, the electrically driven rudder engines were vulnerable and created constant emergencies by breaking down. *Heidkamp* had one especially heavy sea crash into the No. 1 boiler room through the fan intakes, temporarily extinguishing the burners and darkening parts of the ship. On board *Hipper* the chief engineer reported the rudder engine overheating due to continuous adjustments and, although he managed to increase the flow of coolant to the engine, requested less use of the rudder.

The larger ships were also affected by the heavy seas from astern. Speed was temporarily reduced to 15 knots around 21:00 but this created problems for the fuel pumps of *Scharnhorst* and had to be increased again. Speed was

thereafter kept between 22 and 26 knots during the night. As darkness approached, stern lights were rigged to help keep contact and avoid collisions. The destroyers were instructed over ultra-short-wave (USW) radio to do their best and seek to regain contact at first light if they could not keep up. It was imperative that the fleet was as far north as possible by dawn and it was better for some of the destroyers to find their way alone than for the landings to be delayed. On the positive side, the chance of being sighted by British aircraft was negligible.

The soldiers on board the ships of Groups I and II, mostly Alpine mountain troops from landlocked Austria, believed they had been thrown into hell. Trapped in a crowded alien environment below deck, with an unbearable atmosphere, they sank into apathy, paralysed by seasickness and fear. The officers fought for the lockers at first to preserve their dignity, but soon few cared at all. The noise was infernal as the shrieking of the storm added to the racket of the fans and engines and the never-ending seas crashing over the forecastle. Everything loose was thrown about by the violent rolls. The next sea could be fatal if sleep or exhaustion relaxed attention. Arms and legs were broken, heads smashed and the medical personnel worked overtime.

Around midnight, the German fleet passed the latitude of Bergen. The wind increased further and some of the destroyers started to lose touch with the flagship. Rolls of over 45 degrees were experienced during the night and most army equipment lashed on deck as well as the ships' own boats and depth-charges went overboard. Some of the latter exploded in the wake of the corkscrewing ships, creating yet another unwanted danger and tension on board the larger ships, where it was at first believed the explosions were incoming shells. Moving about on deck was hazardous and in spite of ropes strung on all decks, at least ten men went overboard from the destroyers between the evening of the 7th and the morning of the 9th. '*Keine Rettungsversuche*' – 'No rescue attempts' – was the laconic order

given. It would have been virtually impossible to rescue anybody from the rolling ships anyway, even if they, against all odds, survived more than a few minutes in the icy water.[19]

During the evening of 7 April, the ships for the southern invasion ports also left Germany. Konteradmiral Hubert Schmundt, acting Flag Officer Scouting Forces, was in charge of Group III heading for Bergen. His force consisted of the light cruisers *Köln* and *Königsberg*, the gunnery training ship *Bremse*, the torpedo boats *Leopard* and *Wolf* and the depot ship *Carl Peters* with six S-boats. The ships, with some 1,900 soldiers of the 69th Infantry Division, joined up in the forenoon of the 8th west of Ringkøbing, having departed Wilhelmshaven, Cuxhaven and Heligoland.[20] Support personnel, field guns, heavy materiel, horses, vehicles, A/A guns and further provisions were on board the transports *Rio de Janeiro, Marie Leonhardt* and *Curityba* already at sea.

Schmundt considered Bergen the most dangerous objective of the whole invasion. Groups I and II would be very exposed indeed, but unless the Royal Navy was already at sea, they would have a fair chance of escaping interception even if they were likely to be sighted. Group III would leave Germany some twenty-four hours behind Groups I and II, and one alternative Schmundt had to consider was being confronted by fully alerted British forces. Bergen was only eight to nine hours' steaming from Scapa Flow and blocking the Bergen–Shetland Narrows would, in Schmundt's opinion, become a British priority once it was clear that German ships were at large. It did not ease his worries one bit that all the large modern units of the Kriegsmarine had been allocated to Narvik, Trondheim and Oslo.

To Schmundt's relief, the weather closed in during the morning of the 8th with low clouds, rain and dense fog reducing visibility, and the ships continued in a loose formation maintaining USW radio contact. The air cover had to give up and turn for home, but that meant little as no British aircraft or submarines could find them either. A signal from Group West at

12:58 reported the British cruiser *Galatea* between Stavanger and Aberdeen based on radio intercepts. She was probably not alone and an encounter might be likely. Schmundt considered turning south to remain inside the fog belt until nightfall, but decided against as he had only USW radio contact with the ships of his group. Around 17:00, the fog lifted sufficiently for the ships of Group III to gain visual contact. The cruisers formed line-abreast just under a mile apart with *Bremse* and *Carl Peters* astern while *Leopard* and *Wolf* secured the flanks. At 17:45, Group West forwarded a radio interception report indicating a large number of enemy ships off western Norway. Schmundt found this information less than useful as the observation was six hours old and the ships could be anywhere by now – including in Bergen. In fact, danger was closer than he would have cared, had he known. Vice Admiral Edward-Collins's 2nd Cruiser Squadron was probably only some 60–70 miles away from the German force – between them and Korsfjorden, the entry to Bergen. Besides *Galatea* and *Arethusa*, the British force consisted of fifteen destroyers and would have been a deadly threat to Schmundt's group. The two British cruisers had only three dual 6-inch turrets compared to the three triple 15-cm (5.9-in) turrets of the Germans, but *Köln* and *Königsberg* were loaded with troops and there is little doubt that the large number of quarrelsome *Tribal* destroyers in the group would have been a challenge to Group III, had they met. During the evening, however, the British force was instructed to join the Home Fleet further west, opening a passage for the Germans.

At nightfall, Group III was some 20 miles west of Karmøy, zigzagging on a northerly main course at 15–17 knots. The fog had lifted, but the night was dark with rainsqualls, and the ships closed up to remain in contact. Conditions were nothing like they were further north, but the wind had freshened and the sea was heavy. Utsira and later Slåtterøy Lighthouse came in sight and speed was reduced to arrive at the entry to the Bergen Leads on schedule. Nothing more happened while at sea, and in spite of

Admiral Schmundt's pessimism, Group III reached the Norwegian coast as planned.

Just after 05:00 on the 8th, the third K-class cruiser, *Karlsruhe*, under the command of Kapitän zur See Friedrich Rieve, in command of Group IV, left Wesermünde heading for Kristiansand. In company were the torpedo boats *Luchs, Seeadler* and *Greif* and the depot ship *Tsingtau*. On board were 1,070 men, including Konteradmiral Schenk, the designated commanding admiral for the Norwegian south coast, and his staffs. C-in-C Torpedo Boats Kapitän zur See Hans Bütow was on board *Luchs*, and Korvettenkapitän Wolf Henne, Commander of 5th Torpedo Boat Flotilla, was on board *Greif*. Both would be prepared to take independent actions if the flag should falter. Kapitänleutnant Rudolf Petersen's 2nd S-boat Flotilla, also assigned to Group IV, was a mix of boats of different designs, which caused operational challenges. He and his crews were among the most experienced *torpedomänner* of the German navy and would run independently towards the Skagerrak. This group also reached the entry to their target as planned.[21]

The last of the western groups to leave for Norway was Group VI, comprising the minesweepers *M1*, *M2*, *M9* and *M13* with 150 men to secure the small port of Egersund. The tiny flotilla under the command of Korvettenkapitän Kurt Thoma of *M9* left Cuxhaven at 20:30 and anchored off the island of Neuwerk, waiting for the appropriate time to head north. At 05:45 on the 8th, anchors were weighed again and course resumed on a flat sea with a light south-easterly wind. Later, Group VI met up with the minesweepers and minelayers of Groups X and XI, heading for Denmark, and the small ships travelled north together.[22]

In the east the cruiser *Blücher*, released from the yards only a week earlier, was leading Group V for Oslo. During the transfer to Oslo, Konteradmiral Kummetz would be in charge, reporting to Admiral Carls of Group East in Kiel. At 03:00 in the morning of the 8th, the group weighed anchor in darkness and headed north through the Belts. *Blücher* was in the

van, followed by the cruisers *Lützow* and *Emden* as well as the torpedo boats *Kondor, Albatros* and *Möwe*. Almost 2,200 Wehrmacht personnel were on board the ships, mostly soldiers of 1st and 2nd battalion of IR 307, but there were also staff personnel, naval artillerymen, communication personnel, pioneers, war correspondents and ground crew for the Luftwaffe units to be stationed at Oslo-Fornebu airfield.[23]

Groups VII, VIII and IX to take control of Copenhagen and the Belts were the last to leave during the evening of the 8th. Except for *Schleswig-Holstein*, these groups largely consisted of minelayers, S-boats and auxiliaries.[24]

All ships were at sea and there was no turning back.

War of Nerves

When the first report of German warships heading north off Heligoland reached Whitehall at 06:37 on 7 April there was no understanding of what was going on. At 08:48, a Hudson of 220 Squadron reported 'one cruiser and six destroyers escorted by aircraft' on a northerly course off Horns Reef. This report only reached C-in-C Home Fleet Admiral Forbes at Scapa Flow at 11:20. Half an hour later, he received a supplementary signal from C-in-C Rosyth that the cruiser was 'probably of the *Nürnberg*-class'. The shadowing Hudsons had been chased off, but bombers were on their way.

At 13:15, an entry in the Admiralty war diary was made, stating air reconnaissance in the afternoon of the day before had confirmed *Scharnhorst* and *Gneisenau* to be at anchor off Wilhelmshaven while one pocket battleship, two K-class cruisers and one *Hipper-class* cruiser were moored at the various docks. *Lützow* was (falsely) reported to be in Stettin. German U-boats were operating near the Orkneys, while one was believed to be in the Bristol Channel and one in the Irish Sea. This outdated and partly incorrect information, together with the initial underreporting of Groups I and II at sea, gave the Admiralty a picture that nothing untoward

was going on.[25] At 14:00, there was another brief entry in the war diary noting that a heavy cruiser, probably *Blücher*, had been sighted off Gedser on a westerly course, while C-in-C Rosyth reported three destroyers off Horns Reef heading south, back towards Germany. At about the same time, a signal was issued from the Admiralty:

> Recent reports suggest a German expedition is being prepared. Hitler is reported from Copenhagen to have ordered unostentatious movement of one division in ten ships by night to land at Narvik with simultaneous occupation of Jutland. Sweden to be left alone. Moderates said to be opposing the plan. Date given for arrival at Narvik was 8th April. All these reports are of doubtful value and may well be only a further move in the war of nerves.[26]

Admiral Forbes later remarked that in the light of subsequent events, 'it was unfortunate that the last paragraph was included.' First Sea Lord Admiral Pound was out of office at Mountbatten's estate near Romsey most of Sunday 7 April and the wording of the signal was that of DCNS Rear Admiral Phillips. When he arrived at Whitehall around 20:00 that evening, Pound did not modify any of the actions taken or signals sent during the day. Neither did he take any initiatives to get an update of the situation or verify the state of affairs with the other services or the CoS, so one must assume he believed the situation was under control and concurred with what had been done. Churchill came even later and he neither made any modifications nor added any instructions beyond those already issued. According to the diary of Captain Ralph Edwards, Director of Operations (Home), 'The Old Man [Pound] was away fishing for salmon and arrived back rather late in the evening dead beat. DCNS [Phillips] was tired and the First Lord well dined. The result was they all failed to come to any useful decision.'[27] It was incomprehensible to the Admiralty that Germany would try anything like invading western Norway – far less Narvik – across the North Sea. Such an operation would, it was believed, require ship concentrations well beyond the capacity of the Kriegsmarine; 7 April 1940 is not a famous day in the history of the British Admiralty.

At Scapa Flow, when the report of the Blenheims having attacked heavy German forces in Heligoland Bight arrived at 17:35, Admiral Forbes ordered his ships to raise steam and prepare for sea.[28] At 20:50, *Rodney, Repulse* and *Valiant* cleared Hoxa boom and half an hour later reached open water where a north-easterly course was set. The cruisers *Sheffield* and *Penelope* were in company, as were the destroyers *Codrington, Brazen, Bedouin, Electra, Eskimo, Escapade, Griffin, Jupiter, Punjabi* and *Kimberley*.

About half an hour later, 2nd Cruiser Squadron under Vice Admiral Edward-Collins left Rosyth with orders to make a sweep into the North Sea and then join the Home Fleet. Besides the cruisers *Galatea* and *Arethusa*, the force consisted of the destroyers *Afridi* D(4), *Cossack, Gurkha, Kashmir, Kelvin, Sikh, Mohawk, Zulu* and the Polish destroyers *Grom, Burza* and *Blyskawica*. Next morning they were joined by *Somali* D(6), *Mashona, Matabele* and *Tartar*. The French cruiser *Emile Bertin* also took to sea with the two destroyers *Tartu* and *Maillé-Brézé*, but lost contact during the night and turned back.

The carrier *Furious* was at Clyde after a refit and Forbes seems to have forgotten her in the general melee. It was not until 16:37 on the 8th that the Admiralty intervened, ordering *Furious* to re-embark her aircraft and prepare to join the fleet. It would be another twenty-four hours before her two Swordfish Squadrons (Nos 816 and 818) had been landed on board and Captain Troubridge could take to sea. The carrier's Fighter Squadron (No. 801) was at Evanston, too far off to comply in time, and *Furious* took to sea without fighters on board.

Vice Admiral Layton, commander of 18th Cruiser Squadron, was at sea with *Manchester* and *Southampton*, covering convoy ON-25 to Norway. During the afternoon, he was ordered by the C-in-C to turn the convoy back to Scotland and join the Home Fleet. It appears that Admiral Layton missed or misread parts of the signal from the C-in-C and, considering his orders

inadequate, he stood off to the south during the night, intending to regain contact with the convoy and its local escort in the morning. This was not to be; the convoy split up, some ships turning back, others did not. ON-25 had left Methil on 5 April with six British and twenty-five neutral ships for Norway. A further ten ships, nine of them neutral, joined from Kirkwall. When the order to turn back came, there was no explanation. Apparently a number of the merchantmen believed it was due to the deteriorating weather and, as they had no information of the German ships at sea, continued on their own, feeling safe from German interception in the gale.[29]

Left behind at Rosyth for the time being was Admiral Cunningham's 1st Cruiser Squadron with *Devonshire, Berwick, York, Glasgow*, and eight destroyers embarking troops and equipment for Bergen and Stavanger.[30] The cruiser *Aurora* and six destroyers were at the Clyde, ready to provide cover and escort for the transports to Narvik and Trondheim.

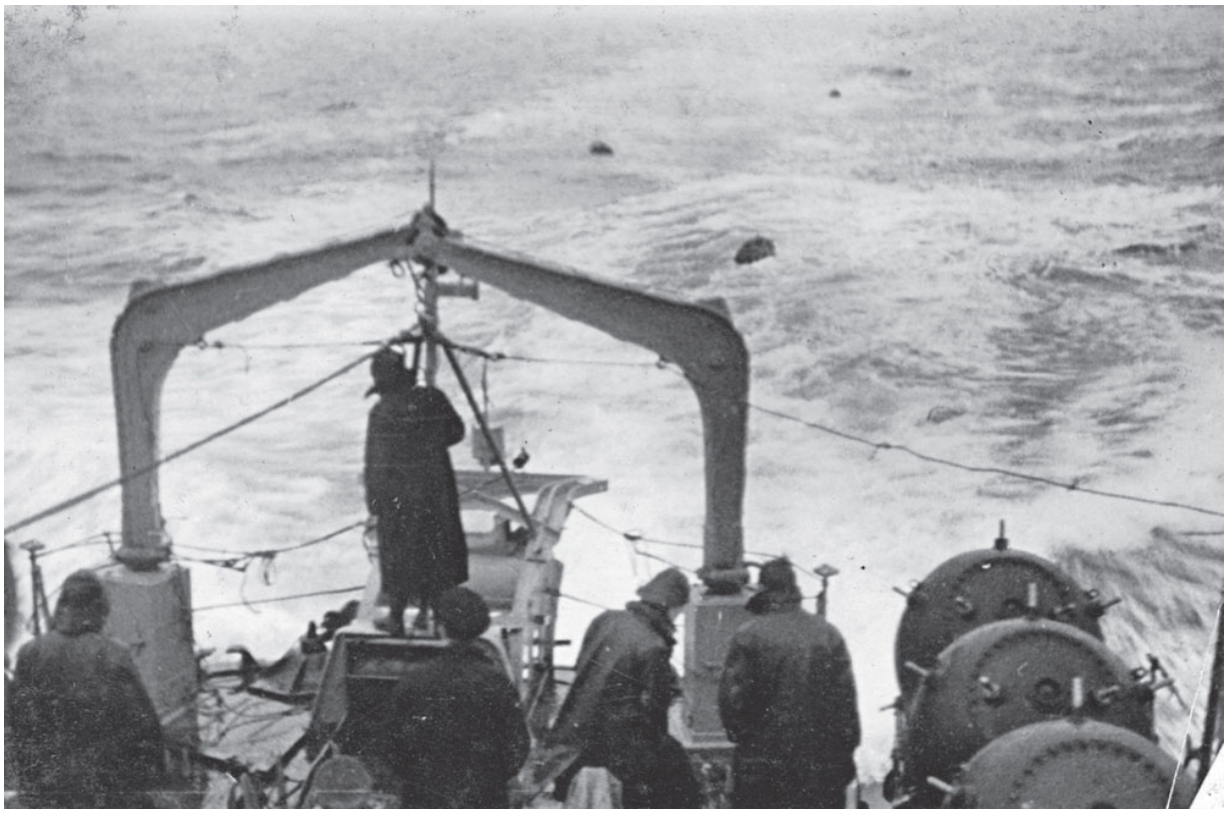
Just before leaving Scapa Flow in the evening of 7 April, Admiral Forbes received information that the German fleet was reported to consist of 'one battle-cruiser, one pocket battleship, three cruisers and twelve destroyers'. He took it for granted that further updates would reach him once he was at sea, but the weather deteriorated rapidly, hampering the Hudsons from Leuchars, and he would have no further information until next morning. The course set by the Home Fleet upon leaving Scapa Flow would enable the fleet to intercept ships attempting to break out into the Atlantic, but left the central North Sea and the Norwegian coast uncovered. At 22:00, the armed merchant cruisers of the Northern Patrol were withdrawn southward, out of harm's way. Admiral Forbes was preparing to meet an Atlantic breakout.

During the night the fleet steered north-north-east at 20 knots and at dawn on the 8th passed 60º N, between Shetland and Bergen. By then the German fleet was some 200 miles further north-east, off Trondheim, widening the gap with every passing hour.[31]

Minefield Ahead

When Admiral Whitworth arrived off Vestfjorden in the evening of the 7th, the minelayers and their escorts were detached at 19:00, according to plan. They headed for Landegode, north of Bodø, while *Renown*, with only *Greyhound* in company, hovered to the west, around 30 miles off Skomvær Lighthouse. A signal was sent to *Glowworm* and *Birmingham* with estimates of the intended position during the night and next day and orders to join forthwith. *Birmingham* had captured several trawlers, however, and delays in the transfer of prize crews to them and a heavy head-sea would eventually prevent Captain Alexander Madden from complying.[32] The minelayers had no incident entering Vestfjorden and by 05:26 on Monday the 8th, 234 Mk XIV/XV mines were laid in four lines as intended.[33]

The Norwegian auxiliary *Syrian* was at anchor on the landward side of Vestfjorden that morning. The weather was poor with large swells and patches of fog. At 04:20, eight destroyers were observed well inside Norwegian territory. A little later, some of them were seen to be dropping what appeared to be mines from their sterns. Kaptein Bjarne Kaaveland sent a preliminary radio signal to SDD3 in Tromsø while weighing anchor and headed for the lead destroyer. The signal 'Neutral territory' was hoisted at the masthead while 'Protest. Leave Norwegian territory' was repeatedly flashed by lamp. The destroyer, already identified as the British *Hunter* from the pennant H35 on her side, answered by hoisting 'Minefield ahead. Stop for instructions' and replied by lamp, 'Will not leave territory'. Closing, a boat was lowered from *Hunter* and a British officer came across. He informed the Norwegians that mines were being laid and handed Kaptein Kaaveland a map with the coordinates. The officer added that two destroyers would stay with the minefield to warn approaching ships for forty-eight hours and requested *Syrian* to assist. Several merchant vessels had already been stopped and the traffic along the coast was for all practical purposes severed.



Mines being laid in Vestfjorden by British destroyers in the early morning of 8 April. (D Briggs collection)

While the officer from *Hunter* was still on board *Syrian*, one of the other destroyers moved to the north side of the alleged field while the rest headed south-westwards, out of sight in the mist. Kaaveland reported the details of the incident in an updated radio signal to SDD3 at 05:30 and gave the coordinates he had received from the British officer, adding that the eastern side of Vestfjorden was closed to traffic. To pass the minefield, ships would have to leave undisputed Norwegian territory for several tens of nautical miles. From Tromsø, the signal was forwarded to the Admiral Staff in Oslo, where it was registered at 05:58.[34]

While reading the signal, the duty officer at the Admiral Staff, Kaptein Håkon Willoch, was informed that the British and French naval attachés in Oslo were in the building, requesting an urgent meeting with him. Rear Admiral Boyes and his French colleague Capitaine de Frégate d'Arzur wished Willoch a good morning and handed him a copy of a comprehensive memorandum, adding that at that very moment the original was being presented to the Foreign Office by their respective ministers, Dormer and Dampierre. The memorandum, which Boyes insisted required 'immediate attention', argued at length how the deliberate increase in German violations of Norwegian neutrality and the Norwegian inability to prevent this forced the Allied governments to take measures they believed necessary. It had been decided to deny Germany the use of stretches of Norwegian territorial waters and three minefields had been laid the same morning – off Stadtlandet, at Bud and in Vestfjorden. The coordinates of the minefields were given and it was added that British warships would patrol the fields for forty-eight hours to prevent merchant ships entering the danger zones.[35]

At Vevang coast guard station, near Hustadvika, two ships, 'probably British', were reported to have entered Norwegian territory at dawn on the 8th. The destroyer *Sleipner* was ordered out from Kristiansund to investigate. The two intruders were indeed British. After departing *Renown*

in the morning of the 6th, destroyers *Hyperion* and *Hero* went to Sullom Voe for refuelling. They left again in the morning of the 7th with orders to steer for Bud on the Norwegian west coast and there pretend to be laying a minefield. By 03:15 in the morning of the 8th, Ona Lighthouse was sighted and a position obtained. The dummy mine-laying was commenced a little after 05:00 – the two destroyers running at slow speed side by side, heading back and forth on parallel tracks. When three fishing boats were sighted, oil drums filled with seawater were dropped at the inshore end of the lines to imply the laying of mines. After about an hour pretending in this way, the destroyers took positions, one at each end of the 'minefield', to warn off approaching vessels.

Around 07:20, *Sleipner* approached *Hyperion* with the signals. 'Protest, violation' and 'Neutral waters' hoisted. *Hyperion* returned 'Minefield ahead. Stop for instructions', followed by 'Am sending boat'. A boat was lowered and Lieutenants Egan and Treseder came across in spite of the adverse weather conditions. According to Egan, Kaptein Ullring received them 'most courteously in perfect English […] a charming man, who had been at sea for 35 years both in sail and steam'.[36] Lieutenant Egan presented Ullring with a copy of the Admiralty's signal giving the coordinates of all three alleged minefields off the Norwegian coast, adding that 300 mines had been laid within the marked coordinates earlier that morning. The astonished Ullring repeatedly asked the British officers if the mines really had been laid and told them he now feared German reprisals out of all proportion. Having submitted a signal to his superiors in Trondheim, Ullring invited the British officers to join him for breakfast while he awaited instructions.[37]

It took several hours before the answer came, and during the extended breakfast the rapport between the Norwegian and British officers grew very friendly. Ullring suggested that *Sleipner* would take responsibility for guarding the minefield if *Hyperion* and *Hero* would leave Norwegian

territorial waters. Lieutenant Egan, who knew there were no mines, answered that this was probably acceptable and Kaptein Ullring asked to be taken on board the British destroyer to make the final agreements with Commander Nicholson (and undoubtedly take a look at his ship). By now the weather was deteriorating fast and he eventually decided to stay where he was. The answer from the commanding admiral finally came via Trondheim at 10:30. It was short and not very helpful: 'Protest against violation of neutrality […] ref paragraph 17 of neutrality procedures'. The British officers left *Sleipner*, having received a formal protest. Through some further signalling, Ullring accepted responsibility for guarding the 'minefield', whereafter *Hyperion* and *Hero* departed at 11:38.[38]

At Stad, no British naval vessels had been seen and several ships had crossed the area where the minefield was supposed to have been laid. The minelayer *Teviot Bank* had actually been recalled at 22:51 on the 7th, for fear that she might venture into the German forces reported off the Norwegian coast. Being informed by the Admiral Staff that there was a minefield at Stadt, Admiral Tank-Nielsen nevertheless sent the torpedo boat *Snøgg* and two auxiliaries to patrol the area.

Photo from Hustadvika, where only dummy mines were laid. British destroyer *Hyperion* as seen from Norwegian destroyer *Sleipner* (A Wilmar collection).

Photo from Hustadvika, where only dummy mines were laid. Lieutenants Egan and Treseder boarding *Sleipner*. (Marinemuseet) Lieutenants Egan and Treseder boarding *Sleipner*. (Marinemuseet)

The first German knowledge of the British mine-laying was a signal picked up at 07:35 in the morning of 8 April from the British radio station at Cleethorpes, announcing the three danger areas. Politically, it could not have been timed better, as it highlighted perfectly the need for a German 'rescue operation' in Norway. The minefields would not affect the landing operations, but they might disturb the supply and tanker traffic to the northernmost bridgeheads. The SKL believed it quite likely that the whole thing might actually be a bluff by the British, but could take no chances and agreed with Admiral Saalwächter that the relevant transport ships should be instructed to avoid the danger areas, if necessary by passing outside the Leads.[39]

Meanwhile, events progressed at sea.

Glowworm *and* Hipper

The slow Nordic dawn became noticeable on board the German battleships at around 04:45 GeT in the morning of Monday 8 April. At this time, they were some 100 miles off Trondheim, steering 045 for Vestfjorden. Visibility was fair to good and once it was light enough to take a tally, most of the destroyers were found to be missing. It was expected that they were not far away, though, and would soon catch up. During the morning, the wind began to veer north-westerly, increasing to force 7, gusting to 9, with the sea still mounting. [40]

At 04:30 BrT, *Glowworm* reported to *Renown* that she had been hove to during the night, but would shortly proceed to rendezvous as ordered. During the night, *Glowworm*'s gyrocompass had jumped off its mountings and it appears that Lieutenant Commander Roope had decided it was fruitless to try to locate the battlecruiser without it, especially as no fix had been obtained for close to forty-eight hours and *Glowworm*'s position was uncertain. On deck, there was damage due to the heavy seas, and the whaler and motor dinghy had been washed away. A couple of hours after dawn,

another destroyer was sighted, answering ‘Swedish destroyer *Göteborg*’ when challenged. Roope did not find this likely and when the other ship turned away; he ordered steam, hoisted the battle ensign and opened fire. Rolling badly, the shots fell short, and the other ship vanished in the murk before *Glowworm* could follow.[41]

Far from being Swedish, the sighted ship was *Zerstörer Lüdemann* trying to catch up with the battleships. The German lookouts sighted the British destroyer some time before it became obvious they had been sighted themselves and Korvettenkapitän Friedrichs, the captain of *Lüdemann*, was prepared to attack, believing he had a tactical advantage. Fregattenkapitän Hans-Joachim Gadow, C-in-C of 3rd *Zerstörer* Flotilla, also on board, decided their primary task was to bring the soldiers to Narvik, however, and ordered him to turn away towards the north-west. The rest of the German fleet was expected to be to the north-east and it was important that the British destroyer did not find the battleships, should it follow.

Vizeadmiral Lütjens was alerted to the British destroyer through two USW signals from *Lüdemann* recorded at 08:58 and 08:59 GeT. This means that the first sighting of *Glowworm* most likely happened some five to ten minutes earlier, around 07:50 BrT.[42] German reports state that *Glowworm*, when sighted from *Lüdemann*, was at slow speed on a southerly course with unmanned guns and without steam on several boilers. Unless this is a misapprehension, it can only be explained by the repair of the gyrocompass taking longer than expected and Lieutenant Commander Roope believing there was no danger this far north under the prevailing conditions.

Shortly after the first destroyer had vanished, *Arnim* appeared on *Glowworm*’s port bow, closing fast, and a running fight ensued. In the heavy seas neither destroyer scored any hits. *Arnim* was rolling especially badly. On board *Lüdemann*, still speeding away, a USW radio signal was received, believed to come from *Arnim*, briefly sighted through the murk: ‘Am attacking enemy’. Fregattenkapitän Gadow replied as he had done to

Friedrichs: ‘Consider your main task’. Korvettenkapitän Curt Rechel of *Arnim* later denied that the ‘Attack’ signal had come from him. In his version of events, he had only received a fragmented USW signal from *Lüdemann* and was not sure what was going on. The British destroyer suddenly emerged from a rainsquall, too fast for him to get out of harm’s way. Rechel turned *Arnim* north-westwards behind a smokescreen. Roope gave chase and the German reports do not hide the fact that the British destroyer fared much better than the German in the heavy seas. At 35 knots, the foreship and bridge of *Arnim* was seriously damaged and two men lost overboard. Speed was reduced to 27 knots. *Glowworm* could maintain a higher speed without taking damage and started to gain on *Arnim*, firing continuously. *Arnim*’s forward turrets could only bear at times and the theoretical superiority of the five German 12.7-cm (5-in) guns versus the four British 4.7-inch guns came to naught. German reports claim three hits on their adversary, but none of the British survivors confirmed this.

Rechel must have started to feel the situation getting out of hand as he turned to north-east, towards the fleet. At 09:30 GeT, *Gneisenau* received a USW signal from *Arnim*, giving an assumed position, requesting support. Lütjens had already signalled to *Hipper* a few minutes earlier with orders to turn back and sort out the mess. What Lieutenant Commander Roope believed, we shall never know, but he decided to follow the German destroyer, even though it must have occurred to him that she was heading for company. German sources report British survivors to have said they never expected to find a cruiser coming at them, but few of the survivors were on the bridge.

The *Zerstörer* of the 2nd Flotilla had managed to stay close during the night and when the flotilla commander, Fregattenkapitän von Pufendorf in *Jacobi*, received copies of USW signals indicating enemy contact, he ordered the other ships of his group, *Riedel, Heinemann* and *Eckholdt*, to close up and steered towards the scene of action. Not long after, gun flashes

were seen to the north. Before they could get close, *Jacobi* tilted more than 55 degrees during a particularly heavy sea, drenching the port boiler room intakes, shutting down the port engine temporarily and throwing five men overboard. Frustrated, Pufendorf, who did not share Gadow's view on the priorities, had to slow down, but continued towards the encounter.[43]

At 07:59 BrT, Lieutenant Commander Roope sent a signal to Admiral Whitworth in *Renown*, reporting enemy contact at 65º 04' N, 6º 04' E, followed two minutes later by: 'Am engaging enemy destroyer'. Three hundred miles to the southwest, on the bridge of *Rodney*, Admiral Forbes received *Glowworm*'s signals shortly after. The position reported puzzled him. It either meant that the fleet sighted the day before had made over 20 knots during the night in spite of the atrocious weather, or there were two German fleets at large. Both cases were equally alarming. In the Admiralty war diary, there is a scribble over the encoded position of the signal 'wrongly coded'. German reports place the encounter at 64º N, 07º E, 60 miles further south. At 08:40, *Glowworm* reported 'Enemy making smoke' and five minutes later, 'Am endeavouring to draw enemy northwards'. Two more signals followed, reporting the German destroyer retiring north-eastward behind smoke, until at 08:55 came: 'One enemy vessel unknown identity bearing 000º, 6 miles, course 180º'. A position added to the signal was unintelligible except for 65º N. The last signal from *Glowworm* was made at 09:04, fading out and making an ominous indication as to her fate.[44] *Renown* and *Greyhound* turned south shortly before 08:45, as did *Birmingham* and *Fearless*, which had still not caught up with the flag. At 10:00 Admiral Forbes detached *Repulse* and *Penelope* with *Eskimo, Bedouin, Punjabi* and *Kimberley* from the Home Fleet, ordering them to head north-east at maximum speed.[45]

Receiving the signal to search for the destroyer in trouble, Heye ordered all army personnel below deck and turned his cruiser south. Going against the sea, *Hipper* took heavy water and, to facilitate observation and keep the

forward guns ready, speed was kept moderate. From *Lüdemann*, a fantastic sight was witnessed when *Hipper* appeared briefly, crashing majestically through the heavy waves. The foreship and bridge vanished regularly underneath mountainous seas, exposing red-painted keel when it reappeared. *Glowworm* was in for a nasty surprise.

At 09:50 GeT, *Hipper*'s foretop reported a masthead forward to port and shortly after another to starboard. The destroyer to port was shrouded in smoke, apparently from a deliberate attempt to hide. Both ships were rolling madly in the heavy seas. Neither foretop nor bridge could at first decide which of the two emerging destroyers was the enemy and Captain Heye held his fire. The starboard destroyer started to flash 'A-A-A' repeatedly towards the cruiser. The signal did not make sense to the German officers, although Oberleutnant Fügner in the foretop insisted it was English, meaning 'What ship?' Heye still hesitated, but finally gave permission to fire when the foretop reported the signalling destroyer to be flying a White Ensign. It was 09:58 GeT when *Admiral Hipper*'s 20.3-cm guns opened fire in anger for the first time. Range to target was 9,000 yards.

Heye kept the cruiser's bow at the destroyer to avoid torpedoes and only the 'A' and 'B' turrets could bear at first. After three salvoes, the after arcs opened and the 'D' turret could fire too. 'A' turret was at times troubled by seas washing over it and its fire had to be halted when the destroyer came inside maximum depression. Loading and aiming was difficult in the high seas and the interval between salvoes was irregular; all the more so as it was difficult for the main turrets to follow the swift moving destroyer over the shortening distance.

The first hit on *Glowworm* was observed on the starboard side between the bridge and the funnel after the fourth salvo.[46] Lieutenant Commander Roope ordered smoke and turned the destroyer back into it, attempting to gain a respite. *Hipper* followed her moves on the DeTe radar, firing into the smoke. Emerging again, *Glowworm* took several hits from *Hipper*'s 10.5-

cm guns, which meanwhile had been given permission to shoot. The radio room and wireless aerial were destroyed, halting further signalling. Communication between engine room and bridge was severed, creating the need for emergency measures. Further hits opened the hull to the sea. One 20.3-cm shell wrecked the captain's day cabin, temporarily in use as a first-aid station, killing the medics and most casualties. Another exploded deep in the engine room, fracturing steam-pipes and starting multiple fires. Still, engine-room artificer Henry Gregg somehow managed to maintain speed and manoeuvrability. On deck, *Glowworm*'s forward 4.7-inch gun vanished in a gust of fire while parts of the yardarm crashed onto the siren lanyards, starting a banshee wailing above the howl of the storm. The bridge of the destroyer was a mess of twisted plates and tubes, hit by at least one 10.5-cm shell.

Few shots were fired from *Glowworm* during the encounter according to the German reports, and there were no direct hits on the cruiser. Only one shell exploded near the foreship, sending shrapnel harmlessly over the deck. Using the cover of his smokescreen, Roope made a torpedo attack at 10:10 GeT. In spite of being close (under 900 yards), Heye's careful tactics of pointing the bow at his adversary paid off and he was able to avoid the torpedoes, even if the nearest was only yards away to port. Attempts to swing the other mounting out to get off the rest of the torpedoes were repeatedly frustrated; any movement on deck was continuously targeted by *Hipper*'s 37- and 20-mm guns.[47] *Glowworm* turned again, re-entering the smokescreen. Several admiring remarks were made on the bridge of *Hipper* as to the courage and skill of the British captain and his crew. Heye wanted a quick solution to the encounter before further torpedoes could be fired, and he steered the cruiser into the smoke. As he came out on the other side, the two ships were suddenly very close. Fearing that *Glowworm* might get another opportunity to launch torpedoes, Heye ordered 'hard-a-starboard' in order to close and, if necessary, ram the destroyer. The heavy seas delayed

the rudder response, however, and *Hipper* turned slowly. Whether Roope also intended ramming the cruiser or if the ensuing collision happened fortuitously will never be ascertained, in spite of the legend. Lieutenant Ramsey, the sole surviving British officer, later told his rescuers that neither the helm nor the emergency rudder were manned at the time and most likely the destroyer's turn towards *Hipper* was accidental.[48]

Whatever the intentions of the two captains, *Glowworm* tore into *Hipper*'s forward starboard side with sirens wailing, striking just abaft the anchor. The destroyer's bow was pressed under the side of the cruiser and broke off. The remains of the hull scraped along the starboard side armour, making a 115-feet long, crescent-shaped dent, tearing away a large part of the railings, wrecking the forward starboard torpedo mounting. Mechanikergefreiter Ritter, leading seaman on the forward 10.5-cm gun, was lost overboard. Several bulkheads were opened to the sea and 528 tons of water flooded the hull before the leaks could be isolated. The cruiser was not seriously damaged, though, in spite of the forecastle being low in the water and a starboard list.[49]

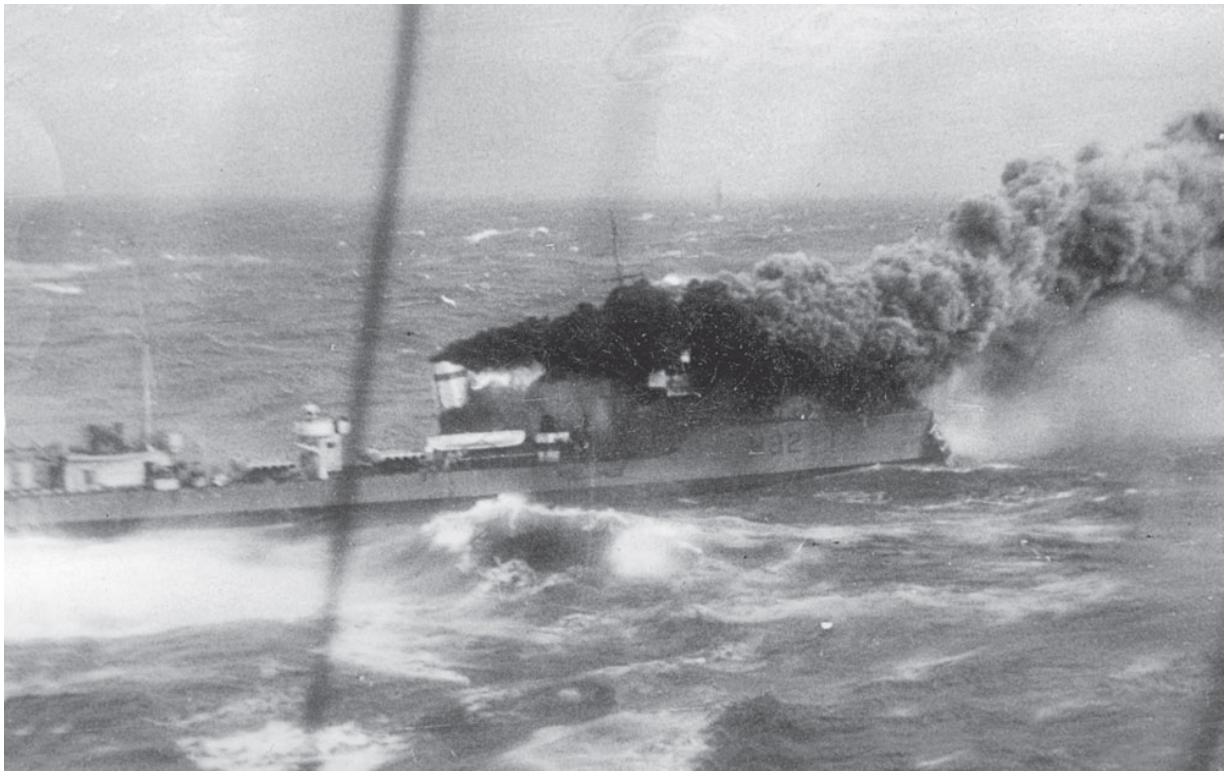
After the collision, *Glowworm* drifted clear with a devastating fire raging amidships and Heye ordered cease fire at 10:13 GeT. Thirty-one shells had been fired from the 20.3-cm guns, 130 from the 10.5-cm guns, 156 from the 37-mm guns, and 132 from the 20-mm guns during the fourteen to fifteen minutes the battle lasted. At first, Heye decided to leave *Glowworm* as she was – incapable of shadowing the German fleet any more. There were other British ships nearby, he reckoned, and these would come to the rescue.[50]

Glowworm was going down quickly and Lieutenant Commander Roope gave the order to abandon ship. As she sank, men jumped into the freezing, oil-covered water. Legend has it that at the last moment, Lieutenant Commander Roope shook the hand of every man around him. At 10:24

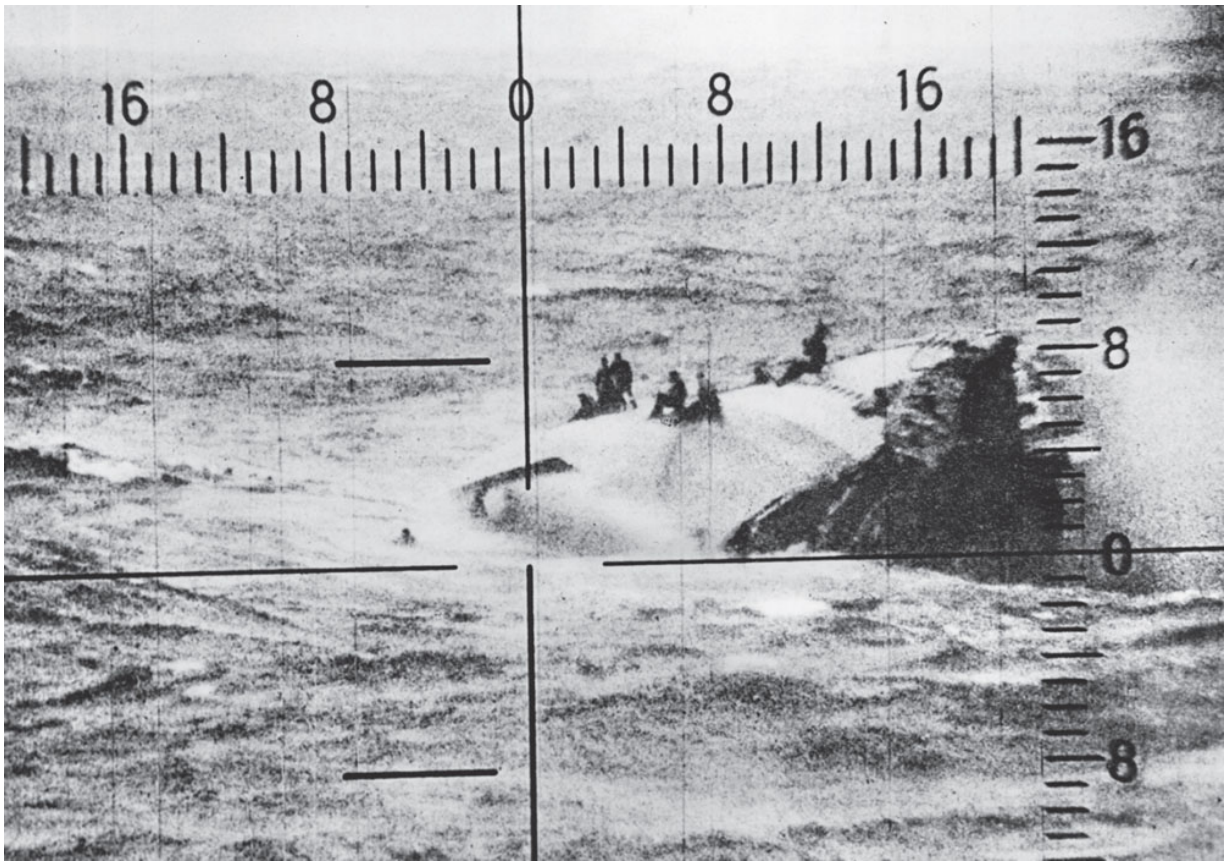
GeT, *Glowworm*'s boilers exploded and she slipped under; the abrupt stop of the siren causing an eerie silence in spite of the storm.

Having searched briefly for Mechanikergefreiter Ritter and not yet fully under way, Captain Heye felt obliged to assist the British sailors struggling for their lives. He gave the unprecedented order for *Hipper* to heave to, downstream of the drifting survivors. In spite of the danger of British ships showing up at any time, he stayed for over an hour picking up survivors. Lowering the boats was out of the question, but all personnel on deck, including some of the soldiers, helped to pull the frozen, oil-soaked British sailors up by ropes and ladders. The oily, freezing water exhausted the British survivors. Many grabbed the ropes thrown at them but could not hold on and drifted away.

Lieutenant Commander Roope was seen in the water helping his men to the ropes. Finally he took hold of a line himself and was pulled some distance up the side of the cruiser. To the horror of British and Germans alike, just before reaching safety, he let go and fell back into the oily water. From a total crew of 149 on board *Glowworm*, forty men were pulled out of the water. Several were wounded and at least two men later died. Torpedo officer Lieutenant Robert Ramsey was the sole surviving officer. The rescuees not in need of medical attention were given dry clothes, cigarettes and hot coffee. They were questioned, but only a few were willing to say much. Captain Heye learned little more than the name of the destroyer and that she had belonged to a group of ships, possibly including one or two heavies, bound for Lofoten. None of the survivors appeared to have any impression of the larger tactical picture and expressed surprise at having encountered a German cruiser at sea.[51]



Glowworm with her bow torn off after colliding with *Hipper*.



Glowworm capsized, a few men clinging to her hull. (Author's collection)

Survivors from *Glowworm* being hauled on board *Hipper*. In all, forty men were rescued, but two of them later died. (E Skjold collection)

With nothing more to be done, Captain Heye ordered speed and signalled for the four destroyers of 2nd Flotilla, which had eventually arrived on the scene just as the battle was over, to gather on the cruiser. At 10:54, a laconic signal was sent to the Fleet: '*Fühlungshalter versenkt*' – 'Shadower has been sunk'. There was no point in trying to reunite with the flag. Group II was near the point where they would have been detached anyway and the five ships from now on proceeded independently. It was far too early to approach the coast and after a sweep north-eastwards to acquire a bearing on the Halten Lighthouse, Heye steered back and forth offshore, waiting for the appropriate time to head for Trondheim. On a request from the destroyers, a moderate speed was set to minimise the sea effects.

It was only on the repatriation of the *Glowworm* survivors after the war, when Lieutenant Ramsey was interviewed by the Admiralty, that the full events of the encounter came to be known in Britain. As a result Lieutenant Commander Roope was posthumously awarded the Victoria Cross, Lieutenant Ramsey received the Distinguished Service Order, and Engine Room Artificer Gregg, Petty Officer Scott and Able Seaman Merritt the Conspicuous Gallantry Medal.[52]

Lütjens was seriously concerned that the encounter with *Glowworm* had compromised the operation. He was certain that the British destroyer had submitted a report before going down and that the Admiralty would understand that German destroyers this far north could only mean an operation against northern Norway. The apparent unpreparedness of the British destroyer, indicated in a signal from Fregattenkapitän Gadow at 12:03 on the other hand, was strong evidence that the Royal Navy had not been put on a general alert. Group I gathered on the battleships during the morning, except *Giese*, which remained missing. At one stage, Lütjens considered whether he should stay with Group II and let Group I carry on alone, but eventually decided to follow the plan. The announcement of the minefield in Vestfjorden, which he was made aware of through Group West

during the morning, made it likely that British ships were in the vicinity. It was also known that the Norwegian armoured cruisers were at Narvik and might be encountered. The fuel situation of the *Zerstörer* meant that they could not return to Trondheim should they run into trouble. *Hipper* and her consorts, on the other hand, would be better off as they could withdraw northward if necessary. Splitting the battleships with one in each group was not an option. During the morning, the wind turned from south-south-west to north-west, increasing further. At midday, Bodø radio forecast a full north-westerly storm in the Lofoten area by nightfall. At 13:50 Lütjens ordered second-degree readiness (half of the positions manned) and a general speed of 25 knots. An hour later, a signal from Group West forwarded an observation from a long-distance reconnaissance aircraft that had sighted 'two battlecruisers, one heavy cruiser and six destroyers' on a northerly course north-west of Ålesund.[53]

The chase was on.

Trying to Keep Up

Ironically, the lost *Glowworm* was the only British surface ship to gain contact with the German invasion fleet on the 8th. It is possible that *Hostile* also brushed with *Hipper* in the afternoon of the 8th. *Glowworm*'s signals were picked up and, after ordering the captured trawler *Nordland* to proceed independently towards Kirkwall, Commander Wright turned to assist. At 15:45, a warship was sighted 'hull down to the North East, steering a North Westerly course'. Wright believed this to be *Renown* and steered to gain touch. Snow reduced visibility and the sighted ship, probably *Hipper*, vanished. At this time, *Renown* was well to the north, meeting up with the mine-laying force, and it is quite possible that *Hostile* might have shared *Glowworm*'s fate, had it not been for the squall.[54]

On the same day, the German auxiliary cruiser *Orion (Schiff* 36) travelled along the Norwegian coast, independent from Weserübung. She

was to have been escorted by *U64* into the Atlantic, but the two never met and Fregattenkapitän Weyher decided to proceed alone as the weather was closing in, favourable for a breakout. At 17:26, a 'steamer' was observed on a south-westerly course, accompanied by four destroyers. Course was changed away from the potential danger and the rest of the breakout went as planned.[55] The five ships that *Orion* narrowly avoided were certainly *Teviot Bank* and her escort returning from the aborted mine-laying sortie at Stadt. Had the destroyers sighted the auxiliary cruiser, she would have been a fine scalp from an otherwise futile sortie.

In the morning of 8 April, there were eight British destroyers in Vestfjorden, between Kommodore Bonte's *Zerstörer* and their target, with *Renown* and *Greyhound* in support further west. At 10:07, the Admiralty initially instructed the mine-laying destroyers, then the 2nd Flotilla as well to join *Renown*; the first in a series of unfortunate signals where the Admiralty would give tactical orders directly into the chain of command. Admiral Forbes, who had crossed the Bergen–Shetland line with the Home Fleet shortly after dawn, some six hours behind Vizeadmiral Lütjens, found the order bewildering, but assumed there was a good reason and did not wish to break radio silence for clarification. At 11:00, a signal to Forbes, copied to Whitworth, stated that the Admiralty now believed that the intelligence regarding landings 'may be true and [that] German forces are on their way to Narvik'.[56] If so, the reasoning for moving the destroyers out of the way rather than ordering *Renown* to join them in blocking the entrance to Narvik has never been adequately explained.

Admiral Whitworth had steered south since receiving *Glowworm*'s emergency signals, but had to slow down from the initial 24 knots as *Renown* started to take damage in the heavy seas.[57] After the signal cut short at 09:04, nothing more was heard from *Glowworm* and Whitworth turned north again at 13:30, meeting up with the destroyers in the afternoon, some 20 miles south-west of Skomvær Lighthouse.

Meanwhile, a Sunderland flying boat of 204 Squadron had been diverted from convoy escort to scout the Norwegian coast. The aircraft hugged the coast to Kristiansund and continued northwards into the Norwegian Sea. Visibility was 1–2 miles with low clouds and constant rain. At 14:00 Flight Lieutenant E L Hyde and his crew sighted what they believed to be 'one battlecruiser, two cruisers and two destroyers' on a westerly course at 64º 12' N, 6º 25' E. This, of course, was *Hipper* and her four destroyers wasting time before heading for Trondheim. Visibility was poor and Lieutenant Hyde ventured too close to the German ships in order to verify their identity. *Hipper*'s A/A fire was accurate and, with his Sunderland damaged, Hyde was unable to stay in pursuit. Turning back, an initial sighting signal was sent, supplemented by a more comprehensive report upon landing about an hour later.[58] *Rodney*'s Walrus was flown off at 18:43 but sighted nothing and sent no reports.[59]

Admiral Forbes took the report from Hyde's Sunderland to mean that even if some German ships might be steering for Narvik, others were heading into the Atlantic. To intercept the latter, he ordered the Home Fleet to alter course to 000º at 15:30, modified to 340º at 16:15. The detached *Repulse, Penelope* and destroyers were also ordered to turn west, but this decision was revised and they were ordered to continue north-eastwards for a rendezvous with *Renown*.

Further north, Admiral Whitworth exercised his own judgement and decided Vestfjorden could wait. Screening westward from Skomvær Lighthouse during the afternoon, assisted by the destroyers, he intended to turn south at nightfall – leaving the entrance to Narvik open. Group I was at the time probably around two hours behind *Renown*. Discovering what was happening, the Admiralty countered his dispositions with a signal at 17:24, concluding that, 'as Sunderland only sighted part of force […] it is possible that the unlocated part is still making for Narvik'. This was followed by a 'Most immediate' signal at 18:50: 'The force under your orders is to

concentrate on preventing any German forces proceeding to Narvik.' It was too late. By 19:15, when Whitworth received the latter signal, the storm, after a brief lull, was worse than ever. He considered the prospect of taking his ships towards land in low visibility during a heavy storm too risky and decided to 'stand to seaward during the dark hours'. He expected the Germans to do likewise. A later signal from the Admiralty, authorising all British ships off Norway to 'enter territorial waters as necessary', made no practical difference at this stage.

The British destroyers had a hard time trying to keep up with *Renown* as they headed west during 8 April. (D Briggs collection)

The weather deteriorated further and, at 20:00, Whitworth ordered his destroyers to gather on the battlecruiser, continuing: 'Our objective is to prevent German forces reaching Narvik. My present intention is to alter course at 21:00 to 280 degrees and to turn 180 degrees in succession at midnight. Enemy heavy ships and light forces have been reported off Norwegian coast. Position of *Birmingham* force is not known.'[60] At 21:30, Whitworth was informed that *Repulse* and *Penelope* were on their way to reinforce him, too far away to make any difference at the moment, but asking for his position. This he gave as 60 miles south-west of Skomvær Lighthouse, steering 310º at 6–8 knots into a north-westerly force 10 storm. At 21:40, Captain Warburton-Lee reported the destroyers 'had become unmanageable in the seaway' and could do nothing but trail behind the battlecruiser, concentrating on staying afloat. Turning back at midnight as intended would not be possible.

By taking his ships into the Norwegian Sea, Whitworth lost his tactical manoeuvrability. He could have turned *Renown* back alone, but chose to stay with the destroyers. No further signals came from Forbes during the evening. Neither did the Admiralty follow up on the missing response to their orders – arguably the occasion when an interception would have been appropriate. In his report, Whitworth concluded: 'hearing that the enemy forces had reached Narvik, I felt very strongly that I had made a mistake.'[61]

Further south, Admiral Forbes learned through a series of signals from the Admiralty during the afternoon that *Manchester* and *Southampton*, the four destroyers escorting the recalled *Teviot Bank*, and the two destroyers pretending to lay mines off Bud were put at his disposal. To his surprise, he was also informed that Vice Admiral Cunningham had been ordered to disembark the troops he had just embarked at Rosyth, less their stores and equipment, and take 1st Cruiser Squadron to sea forthwith.[62] The French Admiral Derrien in *Emile Bertin* and her two destroyers had been placed under Cunningham's command. Furthermore, *Aurora* and destroyers had

been sent to Scapa Flow without troopships and would take to sea as soon as ready. Lastly, Forbes was informed that, unless he broke radio silence, the Admiralty would issue orders as they believed appropriate. The cancellation of Plan R4 came as a great surprise to Admiral Forbes. He had sufficient cruisers already at his disposal to chase the German fleet he believed to be heading into the Atlantic, and could see no reason why R4 should not go ahead as planned.[63]

Nothing more was heard of the ships reported by Flight Lieutenant Hyde but new reports arrived of a second German force consisting of *Gneisenau* or *Blücher* supported by several cruisers and destroyers having passed Skagen on a westerly course.[64] At 20:10, Forbes received a signal sent from the Admiralty an hour and a half earlier, outlining two objectives: to prevent the German northern force returning and to deal with the force in Skagerrak, should they proceed further west 'to Stavanger or Bergen'. In consequence, the Home Fleet was ordered to 'sweep to south with light forces spread to northward, keeping east of 02º 35' E'. Meanwhile, 1st Cruiser Squadron, *Devonshire, Berwick, York*, *Glasgow* and *Emile Bertin*, was instructed to 'sweep to northward keeping west of 01º 50' E' while 2nd Cruiser Squadron, *Galatea, Arethusa* and fifteen destroyers, was ordered to 'act as striking force by night' between the two given longitudes. The 18th Cruiser Squadron, *Manchester* and *Southampton*, was ordered to patrol between 01º 50' E and 02º 35' E, north of 62º N, unless receiving alternative orders from C-in-C. Admiral Forbes immediately turned the Home Fleet to the south.

Later, the Admiralty concluded there were two German fleets at sea and that it was possible they intended to meet up at dawn around 60º N. Fearing the cruiser squadrons might be caught between the two enemy forces, the previous search pattern was cancelled and the groups instructed to gather on the fleet. A night of confusion followed. Additional orders and counterorders were issued by both the C-in-C and the Admiralty, few of

which could be carried out due to the atrocious weather. At midnight of 8/9 April, the Home Fleet passed through 63º 15' N, 03º E, course 180º with a speed of 18 knots. *Manchester* and *Southampton* joined the fleet at 06:30 on the 9th, just south of 62º N, while 1st and 2nd Cruiser Squadrons fell in at 09:30, by which time the British ships had been shadowed by German floatplanes for over an hour.[65]

The cancellation of Plan R4 and the disembarkation of the troops destined for western Norway is arguably the decision with the direst consequences taken during the 8th. It was, according to General Ian Jacobs, assistant military secretary to the War Cabinet, made by Churchill without consulting the CoS or the Cabinet. The order to disembark came by telephone from the First Sea Lord to Admiral Cunningham through C-in-C Rosyth around 11:30, confirmed by signal shortly afterwards. During the subsequent Cabinet meeting the same morning, Chamberlain asked how far the cruisers had come and when they would be able to put the troops ashore. Being informed by the First Lord that the soldiers had disembarked 'so that the cruisers could join the fleet', he 'looked decidedly sheepish', answering with a surprised exclamation 'followed by a distinct silence'.[66]

Plan R4 was intended as an answer to German reactions provoked by the mine-laying. That the Germans came on their own accord should only have made things better, but Churchill and Pound believed they saw a naval operation develop and made a naval response. We shall never know what would have happened had Plan R4 gone ahead and Vice Admiral Cunningham's ships had arrived off western Norway with their troops during the 9th. The British soldiers would not have been in place before the German landings, but had they been to sea in fast cruisers, they could have made a significant difference in Stavanger, Bergen or Trondheim.[67] By chasing a tactical naval victory the Admiralty lost the strategic overview and initiative. This was to cost many lives, eventually topple the Chamberlain government, and make way for Churchill in Downing Street.

Having detached the Narvik destroyers at the mouth of Vestfjorden in the afternoon of the 8th, *Gneisenau* and *Scharnhorst* headed north-west, into the Norwegian Sea. There was a west-north-westerly full storm raging, which towards midnight reached hurricane strength. Kapitän zur See Kurt Cäsar Hoffmann of *Scharnhorst* was not a happy man. Mountainous seas were breaking over his ships, distorting bulkheads and causing cracks. Evidence of metal fatigue was even reported from the bows and the upper works. Just after midnight, one malicious sea broke a vent shaft, resulting in seawater flooding through the intake, polluting seven oil tanks and making some 470 cubic metres of fuel oil unavailable. The port engine had to be temporarily shut down. The flagship instructed 9 knots with one boiler on line per shaft. Hoffmann thought this imprudent under the prevailing conditions and ordered his engineer officer, Fregattenkapitän Leibhard, to keep two boilers on line per shaft. By 02:00 they were about 30 miles south-west of Lofoten on a north-westerly course. A slight decrease in the sea was experienced and speed was increased to 12 knots. To the west, the visibility was poor with frequent snow and hail showers. To the north and east was an almost cloudless horizon. It was cold, with temperatures falling well below freezing during the night.[68]

The destroyers following Vice Admiral Whitworth in *Renown* – *Esk, Greyhound, Hardy, Hotspur, Havock, Hunter, Ivanhoe, Icarus* and *Impulsive* – were, somewhat to their own surprise, afloat and reasonably well in the morning of the 9th. It had been a terrible night, and even old hands could barely remember anything similar.[69] Ordinary Seaman J Brown of *Havock* wrote:

> We were trying to keep up with *Renown* in heavy seas and we managed to take in a lot of water through the forward companion way. We had a foot or so of water sloshing from side to side across the messdeck with a mixture of books, clothing, vegetables and other gear as the ship rolled. The forward messdeck stanchions were bent by the weight of water on the foredeck above and had to be straightened. […] Suddenly everything stopped. No lights, no power, no nothing. [Captain] 'Nutty' Courage sent me from the bridge to contact the Warrant Engineer in the engine room to find out what

the trouble was. We all thought it must be the starboard engine again. We were rolling about, helpless, for quite a long time.[70]

Defects were made good, and, with the first hint of daylight, conditions had improved just enough for Whitworth to turn back towards Vestfjorden, where he should have been, according to the orders from the Admiralty.[71] Unknown to Whitworth, the German destroyers he was supposed to intercept were nearing Narvik at 27 knots.

'From midnight onwards, the weather improved,' Whitworth later wrote, 'but knowing that the destroyers would be widely strung out on account of the weather, I decided to wait until the first sign of dawn and sufficient light to make the turn to the south-eastward without losing touch with them.' The destroyers managed to turn without damage in the heavy seas and by 02:40 the British ships were on course 130º at 12 knots. The sea was still heavy, and the destroyers kept station astern of the flagship.

At 03:37, a darkened ship was sighted from *Renown*, emerging from a snowsquall some 10 miles to the east, followed within minutes by the shadow of another. The two ships were on a north-westerly course approximately opposite to that of the British, around 50 miles west of Skomvær Lighthouse. The ships were identified as German – one *Scharnhorst*-class battlecruiser and one *Hipper*-class cruiser. Admiral Whitworth kept *Renown* on course for ten minutes, picking up speed and preparing for battle. At 03:37, he altered to 080º and ten minutes later to 305º, roughly parallel to the German ships. The bulky battlecruiser was just in the position Whitworth wanted; about 18,500 yards away with the German ships silhouetted against the eastern morning horizon. At 04:05, *Renown* opened fire on *Gneisenau*, which was straddled with the sixth salvo. It was twenty-five years since a British battlecruiser had fired on a German one; the previous time had been in January 1915 at Dogger Bank.[72]

In Norway, it was 'Weser-time'. German warships were entering their designated ports and Operation Weserübung commenced. At 04:46 on 9

April 1940, Admiral Forbes was informed by the Admiralty that ‘four German warships reported entering Oslo Fjord […] engaged by defences, five ships approaching Bergen, at least one at Stavanger [and two] at Trondheim’. Norway was being invaded.

The Second World War was about to change course.[73]

— 26 —
Conclusions

THERE WAS NO 'PHONEY war' at sea at the start of WWII. The hostilities commenced literally within hours of war being declared. The first period of the war would inevitably be a period of learning. New technologies had changed naval warfare, and many lessons would have to be learned the hard way. Experiences from WWI had been forgotten or were ignored – on both sides – while many of the new technologies were inadequately tested and tactics for their optimal use had not been developed. Above all, the aircraft had come of age and would play a role in both land and sea warfare beyond what most naval minds had been able to comprehend.

Individual cases of bravery and chivalrous behaviour were shown on both sides in the beginning, but soon the realisation that this was a full-out war that would not be over by Christmas made chivalry give way to grim determination and inevitable hostility. In the short-term perspective, the Kriegsmarine was best prepared for the war, in spite of the laments of its leaders at the start. Though limited in number, a significant proportion of the ships were modern and the motivation of men and officers was high. Importantly, they were also well trained to use the technology of their ships, operationally as well as tactically. In contrast, it would take the Royal Navy some time to get organised and prepare appropriate ships for the war ahead, always having to look to other parts of the empire in order not to become exposed to threats from other antagonists. In addition, operational routine and tactics had not kept up with or even been adjusted to modern technologies. In far too many cases they had to be developed, tested and

learned after the outbreak of hostilities. One case in particular was the overconfidence in the Asdic system.

The inter-war treaties should have caused the Royal Navy to think differently and by 1939 have adapted to a baseline different to that of 1918. This was not uniformly the case, though, and many RN officers braced themselves for a war they expected to start where WWI had ended twenty years earlier. Hence, the Admiralty and not least local naval commanders were forced to improvise and develop a callousness not seen before. The smaller ships, especially, would have to perform tasks they were not built for and operate under conditions not considered in peacetime. In consequence, the men were stretched to the limit from the beginning. Mines, U-boats and aircraft were everywhere and no place was safe.

During the first six months of the war, the Kriegsmarine's losses stood at one *Panzerschiff*, two destroyers, one torpedo boat, one escort, eleven U-boats and half a dozen minesweepers and auxiliaries.[1] Those were heavy losses for a small navy, but, except for the U-boats, not unbearable. In spite of losses and technical mishaps, there had been a number of successes for the Kriegsmarine – *Courageous* and *Royal Oak* being the most spectacular. Less notable but far more strategically important was the fact that the commerce raiders in the Atlantic, while actually being rather ineffective in their intended function, had strained and dispersed the resources of the Royal Navy, while the Luftwaffe to a large extent had driven the remaining heavy ships of the Home Fleet out of Scapa Flow and the North Sea.

Offensive mine-laying and U-boats had taken a heavy toll of the Allied merchant fleets, although less effective than they could have been, due to lack of ships as well as faulty torpedoes and limited stocks of mines. In some instances, the German ships had proven superior, in other cases not quite up to the standards of the Royal Navy. An issue not fully recognised at this stage was the tendency of the German surface vessels to limit their offensive aggressiveness and even flee in the face of inferior opposition for

fear of damage or loss. While the individual German officer or sailor was undoubtedly as brave as any adversary, Hitler's paranoid fear of losing prestige would shackle his commanders' ability to act with the necessary assertiveness. This was a problem that would haunt the Kriegsmarine in the years to come and almost cripple its combat ability at times.

The SKL was somewhat more aggressive and repeatedly commented in the war diary that 'success requires a certain amount of bravery and acceptance that battleships and heavy cruisers will have to fight the enemy.'[2] After Operation Nordmark, maintenance, improvements and overhaul would hold the larger ships in harbour or yard for some time and the active service list for Raeder and the SKL would for all practical purposes be limited to destroyers and U-boats for offensive operations. By the time weather and shipyards released the ships again, Operation Weserübung would be at the front of everybody's mind and other offensive operations put aside.

From September 1939 throughout most of the winter, virtually every major decision made by the British Admiralty was in response to painful German actions, including the introduction of convoys as well as the less productive transfer of the Home Fleet to western Scotland and the dispersal of the capital units to pursue the elusive raiders in the Atlantic. Churchill feared that unless active measures were taken to recover the initiative, Britain could subside 'into a defensive naval strategy and habit of mind', adding that the search for a naval offensive must be incessant. Tying down the U-boats in the North Sea would be a prime measure of success in the First Lord's mind. This was not accomplished, but the steady attrition of U-boats by an ever more efficient British A/S fleet and lack of replenishment had by the spring of 1940 almost turned the balance in favour of the Royal Navy. The actual number of U-boats sunk was not particularly high, but serious nevertheless for the small German U-bootwaffe.

For the Royal Navy, the first six to eight months of the war were full of frustration and onerous futile days at sea, chasing an elusive enemy seldom found in the place he was reported to be. Intelligence was inadequate, in many instances faulty, cooperation with the other services not as expected, and the French Navy disappointingly largely stayed away from encounters with the Kriegsmarine. Apart from the U-boats sunk, successes were few and losses disturbingly high. On a numerical scale, the Royal Navy could sustain the losses, but British supremacy in the North Sea was threatened, and unless the weaknesses and deficiencies demonstrated in equipment and tactics were remedied quickly, the strategic situation in home waters and the northern Atlantic would be threatened. In 1939, 2,150 sailors were killed, four-fifths of the total British losses at the time.[3] Nevertheless, during the spring of 1940, there were positive signs, not least the first indications of a long-term recovery of the supremacy at sea.

A certain amount of hypothetical considerations are always tempting in a historical analysis; in the case of the war at sea in 1939 to early 1940 it may be justified. Had Hitler allowed an unrestricted U-boat war from day one, had the surface raiders been released at once, had there been sufficient magnetic mines available and had Dönitz had even fifty U-boats more for the Atlantic and for an extended mine-laying campaign, had the Luftwaffe cooperated more actively and, above all, had the torpedoes worked properly, the strategic situation might have been quite different in the spring of 1940. A conscious, well-planned Blitzkrieg at sea in the autumn of 1939, triggered by the Allied declaration of war, might very well have changed the course of at least the first part of the war – even with the limited resources allocated to the German navy.

Without reducing in the slightest the significance of the ‘Battle of Britain’ or the sacrifice of the pilots who were to fight and die in the autumn of 1940, it is possible to argue that the ‘Naval Battle of Britain’ was fought and decided prior to May 1940. In spite of its apparent successes, by

not realising the need for an immediate all-out aggressive approach towards the Royal Navy, the Kriegsmarine had lost its battle for command of the seas around Great Britain by the time the Weserübung forces left German harbours for Norway. The fact that the German command, military and naval, did not realise that the situation that had given them temporary superiority in the North Sea had already changed, clearly shows their inferior understanding of the situation.

After Operation Weserübung and the subsequent campaign in Norway, the Kriegsmarine would for all practical purposes be reduced to a U-boat and small-ship navy. In spite of the threat that *Bismarck, Tirpitz, Scharnhorst* and the other capital ships would pose, they would be deployed piecemeal and never really influence the outcome of the war. The U-boats in the Atlantic could have, but by failing to break the Royal Navy during the first six to eight months of the war, the Kriegsmarine gave its adversary an opportunity to learn how to apply its defensive technologies, develop the necessary tactics and operational experience, and commence building efficient vessels in sustainable numbers.

Had a radical decision been taken some years earlier and the majority of the resources of the German Navy been focused on building submarines and developing their weapons, Dönitz might have had the numbers and means he needed to isolate Britain while it was still possible.

By not winning the Naval Battle of Britain prior to May 1940, Germany could not win the subsequent Battle of the Atlantic.

Appendices

— Appendix A —
Allied and Neutral Merchant Ships Lost, 1 September 1939–8 April 1940

Marine accident, groundings and collisions are not included.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
1939						
3 Sept.	*Athenia*	British	13,581	W of Ireland	*U30* Lemp	Torpedoed without warning. 112 killed.
3 Sept.	*Lloyd Bydgoski II*	Polish	133	Baltic, off Hel	*S23*	Sunk by torpedo from S-boat.
4 Sept.	*Ioannis Carras*	Greek	4,348	Off Gdynia	Aircraft	Damaged by bombs and scuttled by Poles at Gdynia as blockship.
4 Sept.	*Kosti*	Greek	3,933	Off Falsterbo	Mine	No casualties. Wreck was later salvaged.
4 Sept.	*Nordstrand*	Danish	300	W of Horns Reef Light	Mine	
5 Sept.	*Bosnia*	British	2,407	Off Cape Ortegal	*U47* Prien	Stopped by gunfire and sunk by torpedo after crew had taken to boats. 1 killed.
5 Sept.	*Royal Sceptre*	British	4,853	N of Cape Finisterre	*U48* Schultze	Stopped by gunfire and sunk by torpedo after crew had abandoned ship. 1 killed, 32 picked up by *Browning*.
6 Sept.	*Manaar*	British	7,242	SW of Cape da Roca	*U38* Liebe	Sunk by torpedo when crew fired back and sent SSS signal. 7 dead, 63 survivors.
6 Sept.	*Rio Claro*	British	4,086	SW of Cape Finisterre	*U47* Prien	Sunk by torpedo after crew had taken to boats. Rescued by *Stad Maastricht*.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
7 Sept.	*Gartavon*	British	1,777	NW of Cape Finisterre	*U47* Prien	Sunk by gunfire after crew had taken to boats.
7 Sept.	*Olive Grove*	British	4,060	290 miles off Fastnet	*U33* von Dresky	Torpedoed after warning. Crew rescued by US steamer *Washington*. No casualties.
7 Sept.	*Pukkastan*	British	5,809	SW of Land's End	*U34* Rollmann	Torpedoed after crew had taken to boats. Rescued by *Biderdijk*.
8 Sept.	*Kennebec*	British	5,542	SW of Land's End	*U34* Rollmann	Torpedoed after crew had taken to boats. Rescued by *Biderdijk*. Wreck sunk by *Wolverine*.
8 Sept.	*Olive Bank*	Finnish	2,795	Dogger Bank	Mine	21 killed. Survivors rescued by Estonian *Tallona*.
8 Sept.	*Regent Tiger*	British	10,117	SW of Ireland	*U29* Schuhart	Sunk after all crew had taken to lifeboats. No casualties.
8 Sept.	*Winkleigh*	British	5,055	Off Finisterre	*U48* Schultze	Torpedoed after crew had take to the boats. All rescued by *Statendam*.
9 Sept.	*Mark*	Dutch	1,514	NE of Dogger Bank	Mine	
10 Sept.	*Goodwood*	British	2,796	Flamborough Head	Mine laid by *U15*	24 killed.
10 Sept.	*Magdapur*	British	8,641	Off Orford Ness	Mine laid by *U13*	6 killed. 81 survivors rescued by Aldeburgh lifeboat.
11 Sept.	*Blairlogie*	British	4,425	200 miles W of Ireland	*U30* Lemp	Stopped by gunfire. Sunk after crew had taken to boats. All picked up by *American Shipper*.
11 Sept.	*Firby*	British	4,869	NW of Cape Wrath	*U48* Schultze	Torpedoed after crew had taken to boats. Rescued by *Fearless*.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
11 Sept.	*Inverliffey*	British	9,456	SW of Scilly Isles	*U38* Liebe	Sunk by torpedo after stopped and abandoned. No casualties. Rescued by American ship *R G Stewart*.
13 Sept.	*Davara*	British	291	Off Tory Island	*U27* Franz	Shelled and sunk. No casualties.
13 Sept.	*Neptunia*	British	798	W of Ireland	*U29* Schuhart	Torpedoed after crew had left. Rescued by *Binkburn*.
13 Sept.	*Ronda*	Norwegian	5,136	Off Terschelling	Mine	17 killed. 20 rescued by Italian *Providenza*.
14 Sept.	*British Influence*	British	8,431	180 miles SW of Cape Clear	*U29* Schuhart	Stopped by gunfire and sunk by torpedo after crew had taken to boats. Crew picked up by *Ida Bakke*.
14 Sept.	*Fanad Head*	British	5,200	NW of Malin Head	*U30* Lemp	First captured, then sunk. No casualties. Survivors rescued by *Tartar*.
14 Sept.	*Hawarden Castle*	British	210	E of South Foreland	Mine laid by *U17*	5 killed. No survivors.
14 Sept.	*Vancouver City*	British	4,955	Celtic Sea	*U28* Kuhnke	Torpedoed. 3 killed, survivors rescued by *Mamua*.
15 Sept.	*Alex van Opstal*	Belgian	5,965	S of Shambles Lighthouse	Mine laid by *U26*	9 injured.
15 Sept.	*Cheyenne*	British	8,862	WSW of Fastnet	*U53* Heinicke	Stopped by gunfire and sunk by torpedo. 6 killed.
15 Sept.	*Truro*	British	974	NE of Rattray Head	*U36* Fröhlich	Torpedoed. Survivors rescued by trawlers.
16 Sept.	*Arkleside*	British	1,567	150 miles SW of Lands End	*U33* von Dresky	Torpedoed after stopped. Crew transferred to French fishing boats.
16 Sept.	*Aviemore*	British	4,060	SW Cape Clear	*U31* Habekost	Torpedoed without warning. 23 killed. Survivors rescued by *Warwick*.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
16 Sept.	*Bramden*	British	1,594	Off Dunkerque	Mine	3 killed.
16 Sept.	*Rudyard Kipling*	British	333	W of Ireland	*U27* Franz	Captured and scuttled.
16 Sept.	*Wellvale*	British	271	W of Scotland		Lost with all hands to unknown causes. 13 killed.
17 Sept.	*Kafiristan*	British	5,193	SW of Ireland	*U53* Heinicke	Torpedoed after crew had been allowed to abandon ship.
18 Sept.	*Arlita*	British	326	Off St Kilda	*U35* Lott	Sunk by gunfire. Crew rescued by *Nancy Hague*.
18 Sept.	*Kensington Court*	British	4,863	SW Bishops Rock	*U32* Büchel	Sunk by gunfire and torpedo. All crew rescued by Sunderland aircraft.
18 Sept.	*Lord Minto*	British	295	Off St Kilda	*U35* Lott	Sunk by gunfire. Crew rescued by *Nancy Hague*.
22 Sept.	*Akenside*	British	2,694	Off Bergen	*U7* Heidel	Torpedoed after warning. Crew rescued by torpedo boat *Storm*.
22 Sept.	*Martti Ragnar*	Finnish	2,262	Off Arendal, Norway	*U4* Klot-Heydenfeldt	Stopped and boarded. Sunk by explosive charges. Crew landed safely in Norway.
23 Sept.	*Walma*	Finnish	1,361	Off Simogen, Sweden	*U4* Klot-Heydenfeldt	Stopped and boarded. Sunk by explosive charges. Crew landed safely in Sweden.
24 Sept.	*Caldew*	British	287	S of Faroe Islands	*U33* von Dresky	Sunk by gunfire. No casualties.
24 Sept.	*Gertrud Bratt*	Swedish	1,510	Off Kragerø, Norway	*U4* Klot-Heydenfeldt	Stopped by gunfire. Torpedoed after crew had abandoned ship. No casualties.
24 Sept.	*Hazelside*	British	4,646	E of Fastnet Rock	*U31* Habekost	Torpedoed. 12 killed. 22 landed safely.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
24 Sept.	*Phyrné*	French	2,660	Off Orford Ness	Mine laid by *U13*	No casualties.
25 Sept.	*Hanonia*	Estonian	1,781	Off Lindesnes, Norway	*U34* Rollmann	Captured and taken as prize to Kiel. Commissioned by Kriegsmarine in February 1940 as minelayer *Schiff 11.*
25 Sept.	*Silesia*	Swedish	1,839	Off Stavanger, Norway	*U36* Fröhlich	Torpedoed. Crew landed safely.
28 Sept.	*Jern*	Norwegian	875	Off Skudeneshavn	*U32* Büchel	Sunk by explosive charges. Crew rescued by RNN.
28 Sept.	*Nyland*	Swedish	3,378	Off Stavanger, Norway	*U16* Weingärtner	Torpedoed after warning. Crew rescued by RNN.
29 Sept.	*Solaas*	Norwegian	1,368	S of Kristiansand	Mine	No casualties.
29 Sept.	*Takstaas*	Norwegian	1,830	Off Bergen	*U7* Heidel	Torpedoed. Crew rescued by RNN.
30 Sept.	*Clement*	British	5,052	50 miles SE of Pernambuco	*Graf Spee*	Sunk by gunfire. No casualties.
30 Sept.	*Gun*	Swedish	1,198	Off Hanstholm	*U3* Schepke	No casualties.
30 Sept.	*Vendia*	Danish	1,150	W of Hanstholm	*U3* Schepke	Gunfire and torpedo. 11 killed. 6 rescued.
1 Oct.	*Suzon*	Belgian	2,239	42 miles N of Ushant	*U35* Lott	Torpedoed after stopped by gunfire. All crew saved.
2 Oct.	*Baltic*	Finnish	1,086	Off Falsterbo	Mine	
3 Oct.	*Diamantis*	Greek	4,990	Off Land's End	*U35* Lott	Torpedo after stopped. Crew landed in Eire by *U35.*
4 Oct.	*Glen Farg*	British	876	E of Orkneys	*U23* Kretschmer	Torpedoed after the crew had been taken off. 1 killed.
5 Oct.	*Marwarri*	British	8,036	Bristol Channel	Mine laid by *U32*	Grounded in Mumbles Bay. Later refloated and rebuilt.

2 killed.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
5 Oct.	*Newton Beech*	British	4,651	E of Ascension Island	*Graf Spee*	At first given a prize crew but could not keep up with *Graf Spee*, and sunk after a few days.
5 Oct.	*Stonegate*	British	5,044	E of Bermuda	*Deutschland*	Sunk by gunfire after crew had been taken off. No casualties.
6 Oct.	*Lochgoil*	British	9,462	Bristol Channel	Mine laid by *U32*	Grounded in Mumbles Bay. Later refloated and rebuilt.
7 Oct.	*Ashlea*	British	4,222	Between Cape Town and Freetown	*Graf Spee*	No casualties.
8 Oct.	*Binnendijk*	Dutch	6,873	Off Shambles Lightvessel	Mine laid by *U26*	All crew rescued.
8 Oct.	*Vistula*	Swedish	1,018	45 miles off Muckle Flugga	*U37* Hartmann	Sunk by gunfire after found to carry contraband. 9 dead.
10 Oct.	*Huntsman*	British	8,916	SW of St Helena	*Graf Spee*	Used as supply ship and later sunk. No casualties.
12 Oct.	*Aris*	Greek	4,810	Off Achill Island, Ireland	*U37* Hartmann	Torpedoed after refused to stop. 2 killed. Lifeboats with survivors picked up by Danish *Sicilian*.
13 Oct.	*Emile Miguet*	French	14,115	SW of Fastnet	*U48* Schultze	Straggler from convoy KJ-2. Torpedoed after stopped. 2 killed. Survivors picked up by American *Black Hawk*.
13 Oct.	*Gressholm*	Norwegian	681	North Sea off Texel	Mine	3 killed, 6 rescued.
13 Oct.	*Heronspool*	British	5,202	SW of Cape Clear	*U48* Schultze	Torpedoed after long chase. All crew rescued by American *President Harding*.
13 Oct.	*Louisane*	French	6,903	SW of Ireland	*U48* Schultze	Straggler from convoy OA-17. Sunk by gunfire after crew

						had abandoned. 1 killed.
Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
14 Oct.	*Bretagne*	French	10,108	230 miles SW of Fastnet	*U45* Gelhaar	Torpedoed in unescorted convoy KJF-3. 7 killed.
14 Oct.	*Lochavon*	British	9,205	230 miles SW of Fastnet	*U45* Gelhaar	Torpedoed in unescorted convoy KJF-3. No casualties. Crew picked up by *Ilex*.
14 Oct.	*Lorenz W Hansen*	Norwegian	1,918	Off Newfoundland	*Deutschland*	Sunk by gunfire and torpedo. Crew transferred to *Kongsdal* and landed at Kirkwall.
14 Oct.	*Sneaton*	British	3,677	SW of Cape Clear	*U48* Schultze	Stopped by gunfire and sunk by torpedo. 1 killed, survivors picked up by *Alexandria Andre*.
15 Oct.	*Vermont*	French	5,186	SW of Ireland	*U37* Hartmann	Stopped by gunfire. Sunk by torpedo after crew abandoned ship. 2 killed.
17 Oct.	*City of Mandalay*	British	7,028	NW of Cape Finisterre	*U46* Sohler	Torpedoed in convoy HG-3. 2 killed, 76 survivors picked up by American *Independence Hall*.
17 Oct.	*Clan Chisholm*	British	7,256	NW of Cape Finisterre	*U48* Schultze	Torpedoed in convoy HG-3. 4 killed, 74 survivors rescued by several ships.
17 Oct.	*Yorkshire*	British	10,183	NW of Cape Finisterre	*U37* Hartmann	Torpedoed in convoy HG-3. 58 killed. 223 survivors picked up by American *Independence Hall*.
20 Oct.	*Sea Venture*	British	2,327	NE of Shetland	*U34* Rollmann	Stopped by gunfire. Sunk by torpedo. No casualties.
21 Oct.	*Capitaine Edmond Laborie*	French	3,087	Inner Dowsing Lightvessel	Mine laid by *U19*	No casualties.
21 Oct.	*Deodata*	Norwegian	3,295	Inner Dowsing	Mine laid	Whole crew rescued

21 Oct.	*Deodata*	Norwegian	3,295	Inner Dowsing Lightvessel	Mine laid by *U19*	Whole crew rescued by Gorleston lifeboat.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
21 Oct.	*Gustav Adolf*	Swedish	926	NE of Shetland	*U34* Rollmann	Sunk by gunfire after crew abandoned ship. All picked up by Norwegian *Biscaya*.
21 Oct.	*Orsa*	British	1,478	Flamborough Head	Mine laid by *U15*	11 killed, 4 survivors rescued by *Woolston*.
22 Oct.	*Trevanion*	British	5,299	E of St Helena	*Graf Spee*	No casualties.
22 Oct.	*Whitemantle*	British	1,692	Off Witherinsea Light	Mine	Destroyer-laid minefield. 14 killed, no survivors.
23 Oct.	*Albania*	Swedish	1,241	N of Humber Lightvessel	Mine	2 killed. Survivors rescued by *Channel Fisher*.
24 Oct.	*Konstantinos Hadjipateras*	Greek	5,952	Inner Dowsing Lightship	Mine laid by *U19*	4 killed. Survivors rescued by Gorleston lifeboat.
24 Oct.	*Ledbury*	British	3,528	W of Gibraltar	*U37* Hartmann	Sunk by gunfire after using radio. No casualties. Survivors rescued by American *Crown City*.
24 Oct.	*Menin Ridge*	British	2,474	W of Gibraltar	*U37* Hartmann	Torpedoed without warning. 20 killed, 5 survivors rescued by American *Crown City*.
24 Oct.	*Tafna*	British	4,413	W of Gibraltar	*U37* Hartmann	Torpedoed without warning. 2 killed. Survivors rescued by *Keppel*.
27 Oct.	*Brontë*	British	5,317	180 miles SW of Land's End	*U34* Rollmann	Torpedoed in convoy OB-25. Sunk three days later by gunfire from *Walpole* and *Whirlwind*. All crew rescued.
28 Oct.	*Lynx II*	British	250	W of Shetland	*U59* Jürst	Sunk by scuttling charges after crew had abandoned ship.

28 Oct.	*St Nidan*	British	565	W of Shetland	*U59* Jürst	Sunk by scuttling charges after crew had abandoned ship.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
29 Oct.	*Malabar*	British	7,976	Off Land's End	*U34* Rollmann	Torpedoed in convoy HX-5A. 5 killed. Survivors rescued by *Grafton*.
29 Oct.	*Varangmalm*	Norwegian	3,618	Off Humber Lightship	Mine	Destroyer laid minefield. Crew rescued by *Candia*.
30 Oct.	*Cairnmona*	British	4,666	NE of Rattray Head	*U13* Eichhain	Torpedoed without warning after having lost convoy HX-5. 3 killed.
30 Oct.	*Juno*	Finnish	1,241	N of Humber Estuary	Mine	4–5 crew missing. 26 rescued by Norwegian steamer.
30 Oct.	*Thrasyvoulos*	Greek	3,693	Off Fastnet	*U37* Hartmann	Sunk by torpedo after stopped and found to carry contraband. 22 crew missing.
31 Oct.	*Baoulé*	French	5,874	45 miles W of La Corunna	*U25* Schütze	Torpedoed without warning in French convoy 20-K. 13 killed, 33 survivors.
3 Nov.	*Canada*	Danish	11,108	Off Spurn Point	Mine	Crew rescued by *Ringhorn*.
4 Nov.	*Nicolaos M Embiricos*	Greek	5,295	Off Goodwin Sands	Mine	1 killed.
4 Nov.	*Sig*	Norwegian	1,342	Off Humber	Mine	Destroyer laid minefield. 3 killed, 8 wounded.
9 Nov.	*Carmarthen Coast*	British	961	E of Seaham Harbour	Mine laid by *U24*	2 killed, 15 survivors rescued by Seaham lifeboat.
10 Nov.	*Snar*	Norwegian	3,176	Off southern Norway	*U34* Rollmann	Taken to Germany as prize, but released shortly after.
12 Nov.	*Arne Kjøde*	Norwegian	11,019	NW of Butt of Lewis	*U41* Mugler	Torpedoed without warning. 5 men lost. Survivors rescued by *Isis*.
12 Nov.	*Cresswell*	British	275	W of Hebrides	*U41*	Shelled and sunk. 6

					Mugler	killed, 7 survivors picked up by *U41* and transferred to *Phyllisia*.
Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
13 Nov.	*Loire*	French	4,285	Mediterranean, off Malaga	*U26* Ewerth	Torpedoed without warning. No survivors.
13 Nov.	*Matra*	British	8,003	Thames Estuary	Mine	Destroyer-laid minefield. Sailed in convoy HXF-7. 16 killed. Ship was beached.
13 Nov.	*Ponzano*	British	1,346	Thames Estuary	Mine	Destroyer-laid minefield. Crew rescued by Norwegian fishing vessels.
14 Nov.	*Maurice Marguerite*	Belgian	27	Off Gravelines	Mine	Probably British mine. 3 killed.
15 Nov.	*Africa Shell*	British	706	160 miles NE of Lorenzo Marques	*Graf Spee*	No casualties.
15 Nov.	*Woodtown*	British	794	Thames Estuary	Mine	Destroyer-laid minefield.
16 Nov.	*Arlington Court*	British	4,915	320 miles W of Start Point	*U43* Ambrosius	Straggler from convoy SL-7A. Torpedoed without warning. 7 killed.
17 Nov.	*Kaunas*	Lithuanian	1,566	W of Noordhinder Lightship	*U57* Korth	Torpedoed. 1 killed.
17 Nov.	*Sliedrecht*	Dutch	5,133	200 miles S of Rockall	*U28* Kuhnke	Torpedoed after crew had taken to the boats. One lifeboat lost, 26 killed.
18 Nov.	*Blackhill*	British	2,492	Off Longsand Head Buoy	Mine	Destroyer-laid minefield. 1 killed.
18 Nov.	*Carcia Milica*	Yugoslav	6,371	Off Shipwash Lightship	Mine laid by *U19*	No casualties.
18 Nov.	*Parkhill*	British	500	Off Kinnairds Head	*U18* Bauer	Torpedoed without warning. 9 dead, no survivors.
18 Nov.	*Simon Bolivar*	Dutch	8,309	Off Harwich	Mine	Destroyer-laid minefield. 86 killed.
18 Nov.	*Wigmore*	British	345	Off Rattray Head	*U22* Jenisch	Torpedoed without warning in convoy

						IFC. 16 killed, no survivors.
19 Nov.	*B O Börjesson*	Swedish	1,586	Off Spurn Head, Yorkshire	Mine	6 killed. Survivors rescued by trawlers.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
19 Nov.	*Bowling*	British	793	Off Farne Islands	*U13* Scheringer	Torpedoed without warning. 13 killed, no survivors.
19 Nov.	*Darino*	British	1,351	W of Cape Ortegal	*U41* Mugler	Torpedoed after long chase. 16 killed, 11 survivors.
19 Nov.	*Grazia*	Italian	5,857	Thames Estuary	Mine	Destroyer-laid minefield. 6 killed, 19 rescued by *Gipsy* and *Griffin*.
19 Nov.	*Pensilva*	British	4,258	Off Cape Ortegal	*U49* von Gossler	Straggler from convoy OG-7. Torpedoed after chase. No casualties. Rescued by *Echo*.
19 Nov.	*Rhuys*	French	2,921	S of Humber Lightship	Mine	16 killed, 17 rescued.
19 Nov.	*Stanbrook*	British	1,383	W of Noordhinder Lightship	*U57* Korth	Torpedoed without warning. 20 killed, no survivors.
19 Nov.	*Torchbearer*	British	1,267	Off Shipwash Lightship	Mine	Destroyer-laid minefield. 4 killed, 8 rescued
20 Nov.	*Delphine*	British	250	Off Tory Island	*U33* von Dresky	Sunk by gunfire. No casualties.
20 Nov.	*Sea Sweeper*	British	329	Off Tory Island	*U33* von Dresky	Sunk by gunfire. No casualties.
20 Nov.	*Thomas Hankins*	British	276	Off Tory Island	*U33* von Dresky	Sunk by gunfire. No casualties.
21 Nov.	*Les Barges II*	French	296	Bay of Biscay	*U41* Mugler	Sunk by gunfire. No casualties.
21 Nov.	*Sulby*	British	287	NW of Rathlin Island	*U33* von Dresky	Sunk by gunfire. 5 killed, 7 survivors.
21 Nov.	*Terukuni Maru*	Japanese	11,931	Off Harwich	Mine	Destroyer-laid minefield.
21 Nov.	*William Humphries*	British	276	NW of Rathlin	*U33* von Dresky	Sunk by gunfire. 13 killed, no survivors.
22 Nov.	*Arijon*	French	4,374	Bay of Biscay	*U43* Ambrosius	Torpedoed without warning when in convoy BS-14.
22 Nov.	*Elena R*	Greek	4,576	S of Shambles Lightship	Mine laid by *U26*	No casualties.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
22 Nov.	*Geraldus*	British	2,495	Thames Estuary	Mine	Destroyer-laid minefield. Survivors rescued by *Wivern*.
22 Nov.	*Lowland*	British	974	NE of Gunfleet Buoy	Mine	Destroyer-laid minefield. 9 killed, 11 survivors rescued by *Myrtle*.
23 Nov.	*Borkum*	German (British prize)	3,670	North Atlantic	*U33* von Dresky	Set on fire by gunfire and torpedoes when attempting to escape. 4 original German crew killed, the rest escaped.
23 Nov.	*Hookwood*	British	1,537	Thames Estuary	Mine	Destroyer-laid minefield. 2 killed, 15 survivors rescued by *Bittern*.
24 Nov.	*Mangalore*	British	8,886	Off Spurn Lighthouse	Mine	Destroyer-laid minefield.
25 Nov.	*Royston Grange*	British	5,144	50 miles SW of Land's End	*U28* Kuhnke	Torpedoed without warning in convoy SL-8B. No casualties.
25 Nov.	*Uskmouth*	British	2,483	W of Cape Finisterre	*U43* Ambrosius	Sunk by gunfire and torpedo. 2 killed, 23 survivors rescued by Italian *Juventus*.
26 Nov.	*Gustaf E Reuter*	Swedish	6,336	Fair Island Channel	*U48* Schultze	Torpedoed without warning. 1 killed, 33 survivors. Taken in tow by *Kingston Beryl*, but sank next day.
26 Nov.	*Pilsudski*	Polish	14,294	Off Humber Estuary	Mine	Destroyer-laid minefield. 10 crew lost.
27 Nov.	*Spaarndam*	Dutch	8,857	Thames Estuary	Mine	Destroyer-laid minefield. 7 killed.
28 Nov.	*Rubislaw*	British	1,041	Thames Estuary	Mine	Destroyer-laid minefield. 13 killed. Survivors rescued by trawlers.
29 Nov.	*Ionian*	British	3,114	Off Newarp Lightship	Mine laid by *U20*	No casualties. Survivors rescued by *Hastings*.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
30 Nov.	*Realf*	Norwegian	8,083	SE of Flamborough Head	Mine	Destroyer-laid minefield. 1 killed, 42 survivors picked up by *Santa Gata.*
30 Nov.	*Sheaf Crest*	British	2,730	Thames Estuary	Mine	Destroyer-laid minefield. 30 killed. 12 survivors rescued by *Blyskawica.*
1 Dec.	*Arcturus*	Norwegian	1,277	E of Aberdeen	*U31* Habekost	Torpedoed without warning. 9 killed, 8 survivors rescued by *Ivar.*
1 Dec.	*Dalryan*	British	4,558	Thames Estuary	Mine	Destroyer-laid minefield.
1 Dec.	*Mercator*	Finnish	4,260	SE of Buchan Ness	*U21* Frauenheim	Torpedoed without warning. 1 killed, 35 survivors.
2 Dec.	*Doric Star*	British	10,086	Off SW Africa	*Graf Spee*	Scuttled and torpedoed. No casualties.
2 Dec.	*Eskdene*	British	3,829	Off Tyne	*U56* Zahn	Hit by torpedo, but did not sink due to load of timber. Beached on Head Sands and later refloated.
2 Dec.	*Rudolf*	Swedish	2,119	Off May island	*U56* Zahn	Torpedoed without warning. 9 killed, 14 survivors.
2 Dec.	*San Calisto*	British	8,010	Thames Estuary	Mine	Destroyer-laid minefield. 6 killed, 7 injured.
3 Dec.	*Ove Toft*	Danish	2,135	E of Tynemouth	*U31* Habekost	Torpedoed without warning. 6 killed, 15 survivors.
3 Dec.	*Tairoa*	British	7,983	Off SW Africa	*Graf Spee*	Torpedoed. No casualties.
4 Dec.	*Gimle*	Norwegian	1,271	North Sea	*U31* Habekost	Torpedoed without warning. 3 killed, 16 survivors.
4 Dec.	*Horsted*	British	1,670	SE of Flamborough Head	Mine	5 killed.
4 Dec.	*Primula*	Norwegian	1,024	E of Stonehaven	*U31* Habekost	Torpedoed without warning. 8 killed, 7

survivors.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
5 Dec.	*Navasota*	British	8,795	150 miles W of Scilly Isles	*U47* Prien	Torpedoed in convoy OB-46. 37 killed. 45 rescued by *Escapade*, *Clan Farquhar.*
6 Dec.	*Agu*	Estonian	1,575	North Sea	*U31* Habekost	Torpedoed without warning. 18 killed, no survivors.
6 Dec.	*Britta*	Norwegian	6,214	SW of Longships Lighthouse	*U47* Prien	Torpedoed without warning. 6 killed. 25 survivors picked up by Belgian *Memlinc.*
6 Dec.	*Paralos*	Greek	3,180	Thames Estuary	Mine	Destroyer-laid minefield.
6 Dec.	*Vinga*	Swedish	1,974	E Dundee	*U31* Habekost	Torpedoed without warning. No casualties.
7 Dec.	*Streonshalh*	British	3,895	E of Sao Francisco, Brazil	*Graf Spee*	No casualties.
7 Dec.	*Tajandoen*	Dutch	8,159	W British Channel	*U47* Prien	Torpedoed without warning. 6 killed, 62 survivors rescued by Belgian *Louis Scheid.*
7 Dec.	*Thomas Walton*	British	4,460	Off Vestfjorden	*U38* Liebe	Torpedoed without warning inside Norwegian territory. 13 dead, 31 survivors.
8 Dec.	*Brandon*	British	6,668	80 miles SW of Fastnet	*U48* Schultze	Straggler from convoy OB-48. 9 killed.
8 Dec.	*Corea*	British	751	Off Cromer Light	Mine	Destroyer-laid minefield.
8 Dec.	*Merel*	British	1,088	Thames Estuary	Mine	Destroyer-laid minefield.
8 Dec.	*Scotia*	Danish	2,400	North Sea	*U23* Kretschmer	Torpedoed without warning. 19 killed, 2 rescued by *Hafnia.*
9 Dec.	*Magnus*	Danish	1,339	NE of Peterhead	*U20* Moehle	Torpedoed without warning. 18 killed, 1 survivor rescued by trawler *Philippe.*
10 Dec.	*Føina*	Norwegian	1,674	N of Scotland	*U20*	Torpedoed without

					Moehle	warning. 18 killed, no survivors.
Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
11 Dec.	*Garoufalia*	Greek	4,708	S of Vikna Norway	*U38* Liebe	Torpedoed without warning inside Norwegian territory. 4 killed, 25 survivors.
11 Dec.	*San Alberto*	British	7,393	120 miles S Cape Clear	*U48* Schultze	Torpedoed from convoy OB-48. Scuttled by gunfire from *Mackay*. 1 killed.
11 Dec.	*Willowpool*	British	4,815	E Newarp Lightship	Mine laid by U20	No casualties.
12 Dec.	*King Egbert*	British	4,535	Off Haisborough Lightship	Mine	Destroyer-laid minefield.
12 Dec.	*Marwick Head*	British	496	Off North Caister buoy	Mine laid by *U59*	5 killed, 5 survivors.
12 Dec.	*Torö*	Swedish	1,467	Baltic off Falsterbo, Sweden	Mine	Probably drifting Swedish mine. No casualties.
13 Dec.	*Algol*	Swedish	978	Off Falsterbo, Sweden	Mine	Later salvaged and rebuilt. No casualties.
13 Dec.	*Deptford*	British	4,101	Off Stadtlandet Norway	*U38* Liebe	Torpedoed without warning inside Norwegian territory. 32 dead, 5 survivors.
13 Dec.	*Hallett*	British	202	Off Tyne	Mine	Destroyer-laid minefield.
13 Dec.	*Mina*	Estonian	1,173	Off Cross Sand	*U57* Korth	Torpedoed without warning. 17 killed, no survivors.
14 Dec.	*Atheltemplar*	British	8,939	Tyne Estuary	Mine	Damaged by mine when in convoy FN-53. 2 killed. Towed to Tyne and repaired.
14 Dec.	*Inverlane*	British	9,141	North Sea	Mine	Destroyer-laid minefield.
15 Dec.	*Germaine*	Greek	5,217	SW of Ireland	*U48* Schultze	Stopped by gunfire. Sunk after crew had taken to boats. No casualties.
15 Dec.	*H C Flood*	Norwegian	1,907	Off Tyne	Mine	Destroyer-laid minefield.

15 Dec.	*Ragni*	Norwegian	1,264	Off Tyne	Mine	Destroyer-laid minefield.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
15 Dec.	*Rosa*	Belgian	1,146	N of Tynemouth	Mine	1 killed.
15 Dec.	*Strindheim*	Norwegian	321	Near Tynemouth	Mine	Destroyer-laid minefield.
15 Dec.	*Ursus*	Swedish	1,499	Thames Estuary	Mine	Destroyer-laid minefield. 9 killed.
16 Dec.	*Amble*	British	1,162	Off Tyne	Mine	Destroyer-laid minefield.
16 Dec.	*Glitrefjell*	Norwegian	1,568	E of St Abb's Head	*U59* Jürst	Torpedoed without warning. 5 killed, 13 survivors
16 Dec.	*Lister*	Swedish	1,362	Off Newcastle	*U59* Jürst	Torpedoed without warning. No casualties.
17 Dec.	*Bogø*	Danish	1,214	E of May Island	*U59* Jürst	Torpedoed without warning. 17 killed. 3 survivors picked up by *River Earn*.
17 Dec.	*Compagnus*	British	270	NE of May Island	Aircraft	1 killed.
17 Dec.	*Eileen Wray*	British	227	NE of Aberdeen	Aircraft	Towed to Hartlepool, but sank in harbour.
17 Dec.	*Isabella Greig*	British	210	NE of May Island	Aircraft	2 wounded.
17 Dec.	*Jægersborg*	Danish	1,245	E of Firth of Forth	*U59* Jürst	Torpedoed without warning. 18 killed, no survivors.
17 Dec.	*New Choice*	British	108	8 miles ENE of Whitby	Aircraft	No casualties.
17 Dec.	*Pearl*	British	198	SE of Outer Dowsing Lightvessel	Aircraft	1 killed, 3 wounded.
17 Dec.	*Serenity*	British	487	8 miles ENE of Whitby	Aircraft	No casualties.
17 Dec.	*Zelos*	British	227	NE of May Island	Aircraft	No casualties.
18 Dec.	*Active*	British	185	NW of Rattray Head	Aircraft	Possibly sunk by first experimental torpedo attack. 1 killed.
18 Dec.	*Trinity NB*	British	203	Off Kinnaird Head	Aircraft	2 killed.

19 Dec.	*City of Kobe*	British	4,373	Cross Sand Buoy	Mine laid by *U60*	1 killed.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
19 Dec.	*Daneden*	British	210	ESE of Shetland	Aircraft	9 killed.
19 Dec.	*Jytte*	Danish	1,877	Off Souter Point	Mine	10 killed, 8 survivors.
19 Dec.	*River Earn*	British	202	Off Kinnaird Head	Aircraft	No casualties. Survivors picked up by *Rogaland*.
19 Dec.	*Uko*	Estonian	1,050	SW of Utsira, Norway	Aircraft	3 wounded by strafing after having taken to the boats. None killed.
20 Dec.	*Mars*	Swedish	1,877	E of St Mary's Lightvessel	Mine laid by *U22*	7 killed, 15 survivors.
20 Dec.	*Napia*	British	155	Off Ramsgate	Mine	Destroyer-laid minefield. 8 killed.
20 Dec.	*Vega*	Swedish	1,300	Off Ijmuiden	Mine	No casualties, but 7 of the crew of 17 were wounded.
21 Dec.	*Adolf Bratt*	Swedish	1,323	Off Terschelling	Mine	5 killed, 17 survivors picked up by Latvian *Auskelis*.
21 Dec.	*Carl Henkel*	Swedish	1,352	Off May Island	*U21* Frauenheim	Torpedoed without warning. 10 killed, 7 survivors.
21 Dec.	*Comitas*	Italian	3,482	N of Ostend	Mine	Probably British minefield.
21 Dec.	*Mars*	Swedish	1,475	Off May Island	*U21* Frauenheim	Torpedoed without warning. 18 killed, 1 survivor.
21 Dec.	*Rudolf*	Norwegian	924	ENE of Rattray Head	*U46* Sohler	Torpedoed without warning. No casualties.
22 Dec.	*Gryfevale*	British	4,434	Off Newcastle	Mine laid by *U61*	No casualties.
23 Dec.	*Pandora*	British	3,099	N of Tynemouth	Mine	
25 Dec.	*Stanholme*	British	2,473	Bristol Channel	Mine laid by *U33*	12 killed, 12 survivors.
28 Dec.	*Hanne*	Danish	1,080	E of Blyth Pier	Mine laid by *U22*	15 killed, 2 survivors.

28 Dec.	*Resercho*	British	258	E of Flamborough Head	Mine laid by *U15*	No casualties.
31 Dec.	*Box Hill*	British	5,677	The Wash	Mine	Destroyer-laid minefield.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
31 Dec.	*Luna*	Norwegian	959	Off Haugesund	*U32* Büchel	Torpedoed without warning. All crew rescued.
1940						
1 Jan.	*Lars Magnus Trozelli*	Swedish	1,951	NE of Fraserburgh	*U58* Kuppisch	Torpedoed without warning. 7 killed, 15 survivors picked up by Norwegian *Ask*.
3 Jan.	*Svartön*	Swedish	2,475	Off Kinnaird head	*U58* Kuppisch	Straggler from convoy HN-6. Torpedoed without warning. 20 killed.
6 Jan.	*City of Marseilles*	British	8,317	River Tay	Mine laid by *U13*	1 killed. Brought to Dundee for repairs.
6 Jan.	*Eta*	British	81	Outer Gabbard Lightship	Mine	Destroyer-laid minefield.
7 Jan.	*Cedrington Court*	British	5,160	NE of North Goodwin Lightship	Mine	Destroyer-laid minefield.
7 Jan.	*Townelly*	British	2,888	Off Margate	Mine	Destroyer-laid minefield.
8 Jan.	*Gowrie*	British	689	Off Stonehaven	Aircraft	Damaged by near miss and sank. No casualties.
9 Jan.	*Dunbar Castle*	British	10,002	Channel	Mine	Destroyer-laid minefield.
9 Jan.	*Manx*	Norwegian	1,343	Off Kinnaird Head	*U19* Schepke	Torpedoed without warning. 13 killed, 6 survivors.
9 Jan.	*Oak Grove*	British	1,985	Off Cromer Knoll	Aircraft	1 killed.
9 Jan.	*Truida*	Dutch	176	Off Thames Estuary	Mine	No casualties.
9 Jan.	*Upminster*	British	1,013	E of Hammond Knoll Lightvessel	Aircraft	3 killed.
11 Jan.	*Croxton*	British	195	Off Cromer	Aircraft	No casualties.
11 Jan.	*El Oso*	British	7,267	Off Liverpool	Mine laid by *U30*	In convoy HX-14B. 3 killed, 32 survi

					by *U30*	3 killed, 32 survivors.
11 Jan.	*Fredville*	Norwegian	1,150	E of Orkneys	*U23* Kretschmer	Torpedoed without warning. 11 killed, 5 survivors.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
11 Jan.	*Keynes*	British	1,706	Off Cromer	Aircraft	No casualties.
11 Jan.	*Lucida*	British	251	Off Newcastle	Mine	Destroyer-laid minefield. 1 killed.
11 Jan.	*Traviata*	Italian	5,123	Off Cromer Knoll	Mine	Destroyer-laid minefield. No casualties.
12 Jan.	*Danmark*	Danish	10,517	Inganess Bay, Kirkwall	*U23* Kretschmer	Torpedoed while at anchor. No casualties.
12 Jan.	*Granta*	British	2,719	NW of Sheringham	Mine	Destroyer-laid minefield. 12 killed.
12 Jan.	*William Ivey*	British	202	Off Longstone Lighthouse	Aircraft	No casualties.
13 Jan.	*Sylvia*	Swedish	1,524	NE of Aberdeen	*U20* Moehle	Torpedoed without warning. 20 killed, no survivors.
14 Jan.	*Fagerheim*	Norwegian	1,590	Bay of Biscay	*U44* Mathes	Torpedoed without warning. 15 killed, 5 survivors.
15 Jan.	*Arendskerk*	Dutch	7,906	SW of Quessant	*U44* Mathes	Torpedoed after stopped. All crew rescued.
15 Jan.	*Newhaven*	British	162	18 miles SSE of Lowestoft	Mine	Destroyer-laid minefield. 5 killed.
16 Jan.	*Gracia*	British	5,642	Off Bar Light Vessel	Mine laid by *U30*	In convoy OB-72. No casualties. Beached and salvaged.
16 Jan.	*Inverdargle*	British	9,456	Bristol Channel	Mine laid by *U33*	49 killed, no survivors.
16 Jan.	*Josephine Charlotte*	Belgian	3,422	The Downs	Mine	Destroyer-laid minefield. 4 killed.
16 Jan.	*Panachrandros*	Greek	4,661	Off Brest	*U44* Mathes	Torpedoed without warning. 31 killed, no survivors.
17 Jan.	*Asteria*	Greek	3,313	NE of Haisborough Light	Mine	Destroyer-laid minefield. 14 killed,

						11 rescued.
17 Jan.	*Cairnross*	British	5,494	Off Liverpool	Mine laid by *U30*	In convoy OB-74. All crew survived.
17 Jan.	*Enid*	Norwegian	1,140	N of Muckle Flugga	*U25* Schütze	Shelled and torpedoed. No casualties.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
17 Jan.	*Polzella*	British	4,751	N of Muckle Flugga	*U25* Schütze	Torpedoed without warning. 36 killed, no survivors.
18 Jan.	*Canadian Reefer*	Danish	1,831	NE of Cape Vilano	*U44* Mathes	Stopped and sunk by torpedo after crew had taken to lifeboats. No casualties.
18 Jan.	*Flandria*	Swedish	1,157	N of Ijmuiden	*U9* Lüth	Torpedoed without warning. 17 killed, 4 survivors
18 Jan.	*Foxen*	Swedish	1,304	Off Scilly Isles	*U55* Heidel	Torpedoed without warning. 17 killed, 2 survivors rescued by Norwegian *Leka*.
18 Jan.	*Pajala*	Swedish	6,875	Off North Rona, Hebrides	*U25* Schütze	Torpedoed without warning, but U-boat sighted and crew abandoned. No casualties.
19 Jan.	*Patria*	Swedish	1,185	N of Ijmuiden	*U9* Lüth	Torpedoed without warning. 19 killed, 4 survivors
19 Jan.	*Quiberon*	French	1,296	Off Great Yarmouth	*U59* Jürst	Torpedoed without warning. No survivors.
19 Jan.	*Tellnes*	Norwegian	1,694	NW of Orkneys	*U55* Heidel	18 killed, no survivors.
20 Jan.	*Caroni River*	British	7,807	Falmouth Bay	Mine laid by *U34*	No casualties.
20 Jan.	*Ekatontarchos Drakoulis*	Greek	5,329	Off Portugal	*U44* Mathes	Sunk after long chase. 6 killed.
20 Jan.	*Miranda*	Norwegian	1,328	Off Peterhead	*U57* Korth	Torpedoed without warning. 14 killed, 3 survivors.
21 Jan.	*Ferryhill*	British	1,086	Off Blyth	Mine laid by *U22*	9 killed, 2 survivors.

21 Jan.	*Protesilaus*	British	9,577	Bristol Channel	Mine laid by *U28*	No casualties. Beached, but total loss.
21 Jan.	*Tekla*	Danish	1,469	NNW of Kinnaird Head	*U22* Jenisch	Torpedoed without warning. 9 killed, 9 survivors.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
22 Jan.	*Gothia*	Swedish	1,640	N of St Kilda	*U51* Knorr	Torpedoed without warning. 12 killed, 11 survivors.
22 Jan.	*Segovia*	Norwegian	1,387	W of Ireland	*U55* Heidel	23 killed, no survivors.
22 Jan.	*Songa*	Norwegian	2,589	Off Scilly Isles	*U25* Schütze	Torpedoed after crew had taken to the boats. No casualties.
22 Jan.	*Sydfold*	Norwegian	2,434	North Sea	*U61* Oesten	Torpedoed without warning. 5 killed, 19 survivors.
23 Jan.	*Andalusia*	Swedish	1,357	W of Ireland	*U55* Heidel	21 killed. No survivors.
23 Jan.	*Baltanglia*	British	1,523	E of Longstone Island	*U19* Schepke	Torpedoed without warning. All crew rescued.
23 Jan.	*Bisp*	Norwegian	1,000	North Sea	*U18* Mengersen	Torpedoed without warning. 14 killed, no survivors.
23 Jan.	*Onto*	Finnish	1,333	Off Smith's Lightvessel	Mine laid by *U56*	No casualties.
23 Jan.	*Pluto*	Norwegian	1,598	E of Longstone Island	*U19* Schepke	Torpedoed without warning. No casualties.
24 Jan.	*Alsacien*	French	3,819	W of Lisbon	*U44* Mathes	Torpedoed without warning in convoy 56-KS. 4 killed.
24 Jan.	*Varild*	Norwegian	1,085	E of Shetland	*U23* Kretschmer	Torpedoed without warning. 15 killed, no survivors.
25 Jan.	*Biarritz*	Norwegian	1,752	Off Ijmuiden	*U14* Wohlfarth	Torpedoed without warning. 37 killed. Survivors picked up by *Borgholm*.
25 Jan.	*Everene*	Latvian	4,434	Off Farne Island	*U19* Schepke	Torpedoed without warning. 1 killed, 30 survivors picked up by British fishing vessels.
25 Jan.	*Gudveig*	Norwegian	1,300	Off Newcastle	*U19* Schepke	Torpedoed. 10 killed, 8 survivors.

Date *Ship* *Nationality* *Tons* *Position* *Sunk by* *Comments*

Date	Ship	Nationality	Tons	Position	Sunk by	Comments
25 Jan.	*Tourny*	French	2,769	W of Cape Mondego	*U44* Mathes	Torpedoed without warning. Straggler from convoy 56-KS. 8 killed, 9 survivors.
27 Jan.	*England*	Danish	2,319	Off SE Orkneys	*U20* Klot-Heydenfeldt	Torpedoed without warning. 20 killed, 1 survivor.
27 Jan.	*Faro*	Norwegian	844	Off SE Orkneys	*U20* Klot-Heydenfeldt	Torpedoed without warning. 8 killed, 7 survivors.
27 Jan.	*Fredensborg*	Danish	2,094	Off SE Orkneys	*U20* Klot-Heydenfeldt	Torpedoed without warning. 20 killed, no survivors.
27 Jan.	*Hosanger*	Norwegian	1,591	Off SE Orkneys	*U20* Klot-Heydenfeldt	Torpedoed without warning. 17 killed, 1 survivor.
28 Jan.	*Eleni Stathatou*	Greek	5,625	W of Scilly Isles	*U34* Rollmann	Torpedoed without warning. 12 killed.
28 Jan.	*Eston*	British	1,487	Off Blyth	Mine laid by *U22*	Straggler from convoy FN-81. 18 killed, no survivors.
28 Jan.	*Flora*	Greek	2,980	W of Figuera	*U44* Mathes	Torpedoed without warning. 25 killed, no survivors.
29 Jan.	*Eika*	Norwegian	1,503	S of Ireland	*U51* Knorr	Torpedoed without warning. 14 killed, 2 survivors picked up by *U51* and taken to Germany. Repatriated.
29 Jan.	*Stanburn*	British	2,881	SE of Flamborough Head	Aircraft	26 killed, 3 survivors.
30 Jan.	*Bancrest*	British	4,450	Fair Isles Channel	Aircraft	1 killed.
30 Jan.	*Giralda*	British	2,178	Off South Ronaldsey	Aircraft	23 killed. No survivors.
30 Jan.	*Highwave*	British	1,178	Thames Estuary	Aircraft	In convoy FS-83A. Survivors rescued by trawler.
30 Jan.	*Keramiai*	Greek	5,085	Off Scilly Isles	*U55* Heidel	Torpedoed in convoy OB80G. No casualties.
30 Jan.	*Vaclite*	British	5,026	Off Scilly Isles	*U55* Heidel	Torpedoed in convoy OB80G. No casualties.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
30 Jan.	*Voreda*	British	7,216	Off East Anglian coast	Aircraft	Bombed and destroyed. Beached on Winterton Shoal.
31 Jan.	*Start*	Norwegian	1,168	Off Peterhead	*U13* Schulte	Torpedoed without warning. 16 killed, no survivors.
31 Jan.	*Vidar*	Danish	1,353	North Sea	*U21* Stiebler	Torpedoed without warning. 16 killed, 18 survivors.
1 Feb.	*Ellen M*	British	498	NE of Lowestoft	*U59* Jürst	Torpedoed without warning. 9 killed, no survivors.
1 Feb.	*Fram*	Swedish	2,491	Aberdour Bay, Moray Firth	*U13* Schulte	Torpedoed while at anchor sheltering from a storm. 9 killed, 14 survivors.
2 Feb.	*British Councillor*	British	7,048	Off Withernsea	Mine	In convoy AN-8442. All crew rescued. Attempted tow, but sank the next day.
2 Feb.	*Creofield*	British	838	E of Lowestoft	*U59* Jürst	Torpedoed without warning. 17 killed, no survivors
2 Feb.	*Portelet*	British	1,064	SW of Smith Knoll Lightship	*U59* Jürst	Torpedoed without warning. 2 killed, 9 survivors
3 Feb.	*Armanistan*	British	6,805	Off Portugal	*U25* Schütze	Torpedoed without warning in convoy OG-16. Crew rescued by *Monte Abril.*
3 Feb.	*Reet*	Estonian	815	North Sea	*U58* Kuppisch	Torpedoed without warning. 18 killed, no survivors.
3 Feb.	*Tempo*	Norwegian	629	Off St Abb's Head	Aircraft.	Bombed by He111 of KG26. 5 killed, 9 survivors.
4 Feb.	*Flores*	Dutch	350	E of Crouch, Essex	Mine	No casualties.
4 Feb.	*Hop*	Norwegian	1,365	North Sea	*U37* Hartmann	Torpedoed without warning. 17 killed, no survivors.
4 Feb.	*Leo Dawson*	British	4,330	E of Shetland	*U37* Hartmann	Torpedoed without warning. 35 killed, no survivors.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
5 Feb.	*Beaverburn*	British	9,874	150 miles S of Berehaven, Ireland	*U41* Mugler	Torpedoed in convoy OA-84. 1 killed. 76 survivors picked up by *Narragansett*.
6 Feb.	*Anu*	Estonian	1,421	Tay Estuary	Mine laid by *U13*	7 killed.
7 Feb.	*Munster*	British	4,305	Liverpool Bay	Mine laid by *U30*	No casualties.
9 Feb.	*Chagres*	British	5,406	Off Bar Lightvessel	Mine laid by *U30*	2 killed. 62 survivors picked up by HMS *Loch Montreith*.
10 Feb.	*Burgerdijk*	Dutch	6,853	SW of Scillies	*U48* Schultze	Stopped by gunfire and sunk by torpedo after crew had taken to lifeboats. All crew picked up by *Edam*.
10 Feb.	*Silja*	Norwegian	1,259	SW of Ireland	*U37* Hartmann	Torpedoed without warning. 15 killed, no survivors.
10 Feb.	*Theresa Boyle*	British		NE of Aberdeen	Aircraft	He 111 of KG26.
11 Feb.	*Imperial Transport*	British	8,022	200 miles W of Hebrides	*U53* Grosse	Torpedoed without warning. Forepart broke off, while stern section beached in Firth of Clyde. Rebuilt in 1941. No casualties.
11 Feb.	*Linda*	Estonian	1,213	W of Utsira	*U9* Lüth	Torpedoed without warning. 1 killed, 14 survivors rescued by Swedish *Birgitta*.
11 Feb.	*Orania*	Swedish	1,854	NE of Flugga Lighthouse	*U50* Bauer	Torpedoed without warning. 14 killed, 10 survivors rescued by *Fearless*.
11 Feb.	*Snestad*	Norwegian	4,114	W of Hebrides	*U53* Grosse	Torpedoed without warning. 2 killed, 38 rescued by *Albert L Ellsworth*.
11 Feb.	*Togimo*	British	290	W of Cornwall	*U37* Hartmann	Sunk by gunfire after refusing to stop. 1 killed, 10 rescued by Spanish *Monte*

Navajo.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
12 Feb.	*Dalarö*	Swedish	3,927	W of Tory Island	*U53* Grosse	Torpedoed and shelled. 1 killed, 28 rescued by Belgian *Jan de Waele.*
12 Feb.	*Nidarholm*	Norwegian	3,482	W of Ireland	*U26* Scheringer	Torpedoed after warning shots. No casualties.
13 Feb.	*British Triumph*	British	8,501	Off Cromer	Mine	In convoy FS-93. 4 killed. Attempted tow, but sunk.
13 Feb.	*Chastine Maersk*	Danish	5,177	NE of Bergen	*U25* Schütze	Stopped and sunk by gunfire. No casualties. Rescued by Norwegian *Hilda.*
13 Feb.	*Norna*	Swedish	1,022	NW of Ireland	*U53* Grosse	Torpedoed without warning. 18 killed, no survivors.
14 Feb.	*Giorgio Ohlsen*	Italian	5,694	North Sea	Mine	17 killed, 16 survivors.
14 Feb.	*Gretafield*	British	10,191	E of Noss Head, Shetlands	*U57* Korth	Straggler from convoy HX-18. 10 killed, 31 survivors.
14 Feb.	*Langleeford*	British	4,622	W of Ireland	*U26* Scheringer	Straggler from convoy HX-18. Torpedoed without warning. 4 killed, 30 survivors.
14 Feb.	*Martin Goldschmidt*	Danish	2,095	W of Ireland	*U53* Grosse	Torpedoed without warning. 15 killed, 5 rescued by Norwegian *Berto.*
14 Feb.	*Sultan Star*	British	12,306	Off Land's End	*U48* Schultze	Torpedoed without warning. 1 killed, 75 rescued.
15 Feb.	*Aase*	Danish	1,206	Off Land's End	*U37* Hartmann	Torpedoed without warning. 15 killed, 1 survivor picked up by HMS *Verity.*
15 Feb.	*Den Haag*	Dutch	8,971	Bay of Biscay	*U48* Schultze	Torpedoed without warning. 26 killed, 13 rescued by British *Glen Ochry.*
15 Feb.	*Maryland*	Danish	4,895	W of Hebrides	*U50*	Torpedoed without

					Bauer	warning. 54 killed, no survivors.
Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
15 Feb.	*Petten*	Dutch	250	North Sea	Mine	No casualties. Mine could have been British.
15 Feb.	*Rhone*	Danish	1,064	E of Caithness	*U14* Wohlfarth	Torpedoed without warning. 9 killed, 11 rescued by Swedish *Standard*.
15 Feb.	*Sleipner*	Danish	1,066	Moray Firth	*U14* Wohlfahrt	Torpedoed without warning. 13 killed, 28 rescued by *Kipling*.
15 Feb.	*Steinstad*	Norwegian	2,477	W of Ireland	*U26* Scheringer	Torpedoed after warning. 13 killed, 11 rescued.
16 Feb.	*Liana*	Swedish	1,646	N of Kinnaird Head	*U14* Wohlfahrt	Torpedoed without warning. 10 killed, 10 rescued.
16 Feb.	*Osmed*	Swedish	1,545	N of Kinnaird Head	*U14* Wohlfahrt	Torpedoed without warning. 13 killed, 7 rescued.
17 Feb.	*Baron Ailsa*	British	3,656	Off Wells Next Sea	Mine	Destroyer laid mine-field. 2 killed.
17 Feb.	*Kvernaas*	Norwegian	1,819	NW of Schouwen Bank	*U10* Preuss	Torpedoed without warning. No casual-ties.
17 Feb.	*Pyrrhus*	British	7,418	N of Cape Finisterre	*U37* Hartmann	Torpedoed without warning. Strag-gler from convoy OG-18. 8 killed, 78 survivors.
17 Feb.	*Wilja*	Finnish	3,396	S of Scilly Isles	*U48* Schultze	Torpedoed without warning. No casual-ties.
18 Feb.	*Ameland*	Dutch	4,537	Maasbank Buoy	*U10* Preuss	Torpedoed without warning. 3 wound-ed. Crew of 48 rescued by *Zwarte See*.
18 Feb.	*Banderas*	Spanish	2,140	8 miles NW of Cabo Villano	*U53* Grosse	Torpedoed without warning. 22 killed, 7 rescued.
18 Feb.	*El Sontador*	Panama	1,406	E of Shetland	*U61*	Torpedoed without

					Oesten	warning. 17 killed, no survivors.
Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
18 Feb.	*Ellin*	Greek	4,917	NW of Cape Finisterre	*U37* Hartmann	Torpedoed without warning. No casualties.
18 Feb.	*PLM15*	French	3,754	NW of Cape Finisterre	*U37* Hartmann	Torpedoed without warning from convoy RS-10. 42 killed, no survivors.
18 Feb.	*Sangstad*	Norwegian	4,297	E of Kirwall	*U61* Oesten	Torpedoed without warning. 1 killed, 28 rescued by *Brazen* and *Diana*.
19 Feb.	*Tiberton*	British	5,225	Moray Firth	*U23* Kretschmer	Torpedoed without warning. 33 killed, no survivors.
20 Feb.	*Hawnby*	British	5,380	Thames Estuary	Mine	No casualties.
21 Feb.	*Tara*	Dutch	4,760	Off Pentland Skerries	*U50* Bauer	Torpedoed without warning. No casualties, crew landed in Spain.
22 Feb.	*British Endeavour*	British	4,580	W of Vigo	*U50* Bauer	Torpedoed in convoy OGF-19. 5 killed.
22 Feb.	*Loch Maddy*	British	4,996	E of Orkneys	*U57* Korth *U23* Kretschmer	Straggler from convoy HX-19. Torpedoed on 21st by *U57*. 4 killed, survivors abandoned ship. Sunk on 22nd by *U23*.
23 Feb.	*Ejjam*	Danish		Dogger Bank	*M1*	Deliberately rammed while at anchor. No survivors.
23 Feb.	*Gerlis*	Danish		Dogger Bank	*M1*	Deliberately rammed while at anchor. No survivors.
23 Feb.	*Merkator*	Danish		Dogger Bank	*M1*	Deliberately rammed while at anchor. No survivors.
23 Feb.	*Polaris*	Danish		Dogger Bank	*M1*	Deliberately rammed while at anchor. No survivors.

24 Feb.	*Clan Morrison*	British	5,936	Off Wells Next Sea	Mine	In convoy FN-102. Destroyer-laid minefield. 1 killed.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
24 Feb.	*Jevington Court*	British	4,544	Off Wells Next Sea	Mine	In convoy FS-103. Destroyer-laid minefield. No casualties.
24 Feb.	*Royal Archer*	British	2,266	Firth of Forth	Mine laid by *U21*	No casualties.
24 Feb.	*Santos*	Swedish	3,840	Off Kirkwall	*U63* Lorentz	Torpedoed without warning. 31 killed, 12 survivors.
25 Feb.	*Castlemoor*	British	6,574	SW of Ireland	Unknown	Straggler from convoy HX-20. 42 killed, no survivors.
27 Feb.	*Ben Attow*	British	156	E of May Island	Mine	Destroyer-laid minefield. 9 killed.
27 Feb.	*PLM25*	French	5,391	Off Cromer Knoll Lightvessel	Mine	In convoy FS-106. Taken in tow, but struck second mine and sank. 4 killed.
29 Feb.	*Maria Rosa*	Italian	4,211	E of Great Yarmouth	*U20* Klot-Heydenfeldt	Torpedoed without warning. 12 killed, 17 rescued.
1 Mar.	*Mirella*	Italian	5,340	Off Suffolk Coast	*U20* Klot-Heydenfeldt	1 killed, 29 rescued.
1 Mar.	*Vestfoss*	Norwegian	1,388	E of Copinsay	Aircraft	Bombed by aircraft. No casualties.
2 Mar.	*Albano*	British	1,176	E of Hartlepool	Mine	Destroyer-laid minefield. No casualties
2 Mar.	*Domala*	British	8,441	Off Belgian Coast	Aircraft	He111 of KG26. 108 killed. Towed to Solent and beached. Later rebuilt.
2 Mar.	*Eliziena*	Dutch		Off Northumberland coast	Aircraft	He111 of KG26. 2 killed.
2 Mar.	*Lagaholm*	Swedish	2,818	NE of Orkneys	*U32* Jenisch	Sunk by gunfire. 1 killed, 27 survivors.
3 Mar.	*Cato*	British	710	Bristol Channel	Mine laid by *U29*	Destroyer-laid minefield. 13 killed. 2 survivors picked up by HMS *Akita*.
3 Mar.	*Rijnstroom*	Dutch	695	Off Zeebrügge	*U17*	12 killed, no survi-

5 Mar.	*Rijnstroom*	Dutch	695	Off Zeebrugge	*U17* Behrens	12 killed, no survivors.
4 Mar.	*Pacific Reliance*	British	6,717	Bristol Channel	*U29* Schuhart	No casualties.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
4 Mar.	*Thurston*	British	3,072	Bristol Channel	*U29* Schuhart	34 killed, 1 survivor.
4 Mar.	*SNA1*	French	2,655	Bristol Channel		Ran into the sinking *Thurston* and sank too. No casualties.
5 Mar.	*Grutto*	Dutch	920	Off Ostend	*U17* Behrens	18 killed, no survivors.
7 Mar.	*Vecht*	Dutch	1,965	Off Knokke-Heist	*U14* Wohlfarth	22 killed, no survivors.
7 Mar.	*Yolande-Marguerite*	Belgian	26	Off Noord Hinder Lightship	Aircraft	He111 of KG26. 4 killed.
8 Mar.	*Counsellor*	British	5,068	Liverpool Bay	Mine laid by *U30*	Destroyer-laid minefield. No casualties.
9 Mar.	*Abbotsford*	British	1,585	Off Zeebrügge	*U14* Wohlfarth	Torpedoed without warning. 19 killed, no survivors.
9 Mar.	*Akeld*	British	643	Off Zeebrügge	*U14* Wohlfarth	Torpedoed without warning. 13 killed, no survivors.
9 Mar.	*Borthwick*	British	1,097	Off Zeebrügge	*U14* Wohlfarth	Torpedoed without warning. All crew rescued.
9 Mar.	*Chevy Chase*	British	2,719	Off Sheringham	Mine	Destroyer-laid minefield. No casualties.
9 Mar.	*Leukos*	Irish	216	NW of Tory Island	*U38* Liebe	Sunk when warning shot hit by mistake. 11 killed.
9 Mar.	*P Margaronis*	Greek	4,979	Bristol Channel	*U28* Kuhnke	30 killed, no survivors.
9 Mar.	*Santa Godelieva*	Belgian	34	Off North Foreland	Mine laid by *Schiff 11*	3 killed.
11 Mar.	*Amor*	Dutch	2,325	Off North Foreland	Mine laid by *Schiff 11*	No casualties.
11 Mar.	*Eulota*	Dutch	6,236	W of Ouessant, France	*U28* Kuhnke	No casualties. Ship scuttled when rescue not possible.
11 Mar.	*Halifax*	British	165	Off Aldeburgh, Suffolk	Mine	Drifting mine caught in net. No

						casualties
12 Mar.	*Gardenia*	British	3,745	Off Sherringham	Mine	Destroyer-laid minefield. No casualties.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
12 Mar.	*Rose Effeuillée*	French	35	Off North Foreland	Mine laid by *Schiff 11*	No casualties.
15 Mar.	*Melrose*	British	1,589	Off North Foreland	Mine laid by *Schiff 11*	17 killed, 5 rescued.
15 Mar.	*Saba*	Dutch	397	Off North Foreland	Mine laid by *Schiff 11*	7 killed, no survivors.
16 Mar.	*Slava*	Yugoslav	4,512	Bristol Channel	Mine laid by *U29*	1 killed, 33 survivivors.
17 Mar.	*Argentina*	Danish	5,375	E of Shetland	*U38* Liebe	Torpedoed without warning. 33 killed, no survivors.
17 Mar.	*Capitaine Augustine*	French	3,137	Off Margate	Mine	Destroyer-laid minefield. 2 killed.
17 Mar.	*Sint Annaland*	Dutch	3,026	Off North Foreland	Mine laid by *Schiff 11*	No casualties.
18 Mar.	*Protinus*	Dutch	202	Off Ijmuiden	He111 of KG26	4 killed, 7 survivors.
18 Mar.	*Tina Primo*	Italian	4,853	Off North Foreland	Mine laid by *Schiff 11*	1 killed, 36 survivors. Taken in tow, but struck more mines and eventually sank.
19 Mar.	*Charkow*	Danish	1,026	Moray Firth	*U19* Schepke	Torpedoed without warning. 20 killed, no survivors.
19 Mar.	*Minsk*	Danish	1,229	Moray Firth	*U19* Schepke	Torpedoed without warning. 11 killed, 9 survivors
20 Mar.	*Agnes Ellen*	British	293	Off Holyhead	Mine?	Vanished without trace.
20 Mar.	*Barn Hill*	British	5,439	Off Isle of Wight	Aircraft	He111 of KG26. Beached but total loss.
20 Mar.	*Bothal*	Danish	2,109	NE of Moray Firth	*U19* Schepke	Torpedoed without warning. 15 killed, 5 survivors.
20 Mar.	*Phobos*	Dutch	7,412	Goodwins	Mine laid by *Schiff 11*	7 killed, 30 survivors.
20 Mar.	*Viking*	Danish	1,153	E of Moray Firth	*U19* Schepke	Torpedoed without warning. 15 killed, 2

						survivors
21 Mar.	*Algier*	Danish	1,654	15 miles NW of Foula, Shetland	*U38* Liebe	Torpedoed without warning. 5 killed, 26 survivors rescued by *Manx King*.

Date	*Ship*	*Nationality*	*Tons*	*Position*	*Sunk by*	*Comments*
21 Mar.	*Christians-borg*	Danish	3,270	W of Shetland	*U38* Liebe	Torpedoed without warning. 1 killed, 24 survivors picked up by ABV *Discovery II*.
21 Mar.	*Svinta*	Norwegian	1,267	E of Kirkwall	*U57* Korth	Damaged by aircraft on 20 March. Torpedoed next day by U57. No casualties.
25 Mar.	*Britta*	Danish	1,146	NW of Sule Skerry	*U47* Prien	Torpedoed without warning. 13 killed, 5 survivors picked up by Danish *Nancy*.
26 Mar.	*Cometa*	Norwegian	3,794	NW of Orkneys	*U38* Liebe	Torpedoed after stopped and abandoned. No casualties.
26 Mar.	*Daghestan*	British	5,742	Off Copinsay Lighthouse	*U57* Korth	Torpedoed without warning. 4 killed, 28 rescued by HM trawlers
28 Mar.	*Burgos*	Norwegian	3,220	Near Cromer Knoll Lightship	Mine	Destroyer-laid minefield. No casualties.
2 Apr.	*Signe*	Finnish	1,540	W of Orkneys	*U38* Liebe	Straggler from convoy HN-23A. Torpedoed without warning. 19 killed, no survivors.
3 Apr.	*Gorspen*	British		S of Muckle Flugga, Shetland	Aircraft	He111 of KG26.
4 Apr.	*Sansonnet*	British	212	S of Muckle Flugga, Shetland	Aircraft	He111 of KG26. 10 killed, no survivors
6 Apr.	*Navarra*	Norwegian	2,118	W of Orkneys	*U59* Jürst	Torpedoed without warning. 12 killed, 17 survivors landed at Kirkwall by *Atlas*.
8 Apr.	*Okeania*	Greek	4,843	North Sea	Mine laid by *Schiff 11*	1 killed.

Sources: NA-ADM 199/971; NA-ADM 205/2; NA-ADM 267/12;, NA-ADM 199/2130; www.uboat.net; www.wrecksite.eu, www.naval-

history.net, www.warsailors.com; Toghill, *Royal Navy Trawlers* Part I/II.

— Appendix B —
Allied Naval Ships Lost between 1 September 1939 and 8 April 1940

Date	*Name*	*Type*	*Tons*	*Place*	*Cause*	*Comment*
1939						
10 Sep.	*Oxley*	Submarine	1,400 – 1,900	Off Obrestad Light, Norway	*Triton*	Sunk in error when straying off patrol area. 53 killed, 2 survivors.
13 Sep.	*Pluton*	French mine-laying cruiser	6,214	Casablanca	Own mine	Destroyed when mine exploded in port. 186 killed, 120 wounded.
17 Sep.	*Courageous*	Aircraft carrier	22,500	SW of Ireland	*U29* Schuhart	520 killed.
12 Oct.	*Ray of Hope*	Armed drifter	98	Thames Estuary	Mine	
14 Oct.	*Royal Oak*	Battleship	29,000	Scapa Flow	*U47* Prien	833 killed.
30 Oct.	*Northern Rover*	Armed boarding vessel	655	W of Sumburgh Head	*U59* Jürst	Torpedoed without warning. 27 killed, no survivors.
13 Nov.	*Blanche*	Destroyer	1,360	Thames Estuary	Mine	Destroyer-laid minefield
20 Nov.	*Mastiff*	Mine-sweeping trawler	520	Thames Estuary	Mine	Destroyer-laid minefield. Mine exploded during recovery after sweeping.
20 Nov.	*St Claire*	French mine-sweeper	57	Strait of Dover	Mine laid by *U16*	11 dead, no survivors.
21 Nov.	*Gipsy*	Destroyer	1,350	Off Harwich	Mine	Destroyer-laid minefield.
22 Nov.	*Aragonite*	Mine-sweeping trawler	315	Off Deal, Kent	Mine	Destroyer-laid minefield.
23 Nov.	*Rawalpindi*	AMC	16,697	Off Faeroes	*Scharnhorst* and *Gneisenau*	238 of 286 crew were killed.
6 Dec.	*Washington*	Mine-sweeping trawler	209	Off Great Yarmouth	Mine laid by *U59*	On passage to fit out. 1 survivor.
10 Dec.	*Bay of Hope*	Armed drifter	98	Thames Estuary	Mine	Destroyer-laid minefield.

Date	*Name*	*Type*	*Tons*	*Place*	*Cause*	*Comment*
12 Dec.	*Duchess*	Destroyer	1,370	9 miles W of Mull of Kintyre	Collision	Collision with *Barham*. 130 killed, 23 survivors.

13 Dec.	*William Hallett*	Mine-sweeping trawler	202	Off Tyne	Mine	Destroyer-laid minefield. 8 killed, 1 survivor.
14 Dec.	*James Ludford*	Mine-sweeping trawler	506	Off Tyne	Mine	Destroyer-laid mine-field. 1 survivor.
16 Dec.	*Evelina*	Armed Patrol Vessel	202	Off Tyne	Mine	
16 Dec.	*Sedgefly*	A/S trawler	520	Off Tyne-mouth	Mine	Destroyer-laid mine-field. 16 killed.
20 Dec.	*Napia*	Tug	155	Off Ramsgate	Mine	
21 Dec.	*Bayonet*	Boom working vessel	530	Firth of Forth	Mine	Said to have been sunk by a mine laid by *U21*, but most likely ventured into the field it was guarding.
23 Dec.	*Dolphin*	Repair ship	3,099	SSE of Blyth	Mine laid by *U22*	No casualties. Under tow to Scapa Flow (blockship).
23 Dec.	*Glen Albyn*	Armed drifter	82	Loch Ewe	Mine laid by *U31*	Wooden steam drifter. Experimental minesweeper against magnetic mines but set one off.
23 Dec.	*Promotive*	Armed drifter	78	Loch Ewe	Mine laid by *U31*	Set off magnetic mine, sweeping *Nelson* free.
25 Dec.	*Loch Doon*	A/S trawler	534	E of Blyth	Mine laid by *U22*	15 killed, no survivors.
28 Dec.	*Barbara Robertson*	Mine-sweeping trawler	325	NW of Butt of Lewis	*U30* Lemp	Shelled and sunk. 1 killed, survivors picked up by Swedish *Hispania*.
1940						
7 Jan.	*Seahorse*	Submarine	670 – 960	NW Heligo-land	A/S unit	Sunk by 1st Mine-sweeping Flotilla. 39 killed, no survivors.
7 Jan.	*Undine*	Submarine	540 – 730	SW Heligoland	A/S unit	Forced to surface by German minesweep-ers. No casualties.

Date	*Name*	*Type*	*Tons*	*Place*	*Cause*	*Comment*
9 Jan.	*Starfish*	Submarine	670 – 960	Heligoland Bight	A/S unit	Forced to surface by German minesweepers. No casualties.
12 Jan.	*Valdora*	Armed patrol vessel	251	Cromer area	Aircraft	
19 Jan.	*Grenville*	Destroyer	1,485	Thames Estuary	Mine	Destroyer-laid minefield. 76 killed.
21 Jan.	*Exmouth*	Destroyer	1,475	Moray Firth	*U22* Jenisch	Torpedoed without warning. No survivors.
26 Jan.	*Durham Castle*	Accommodation ship	8,240	NE of Cromarty	Mine laid by *U57*	In tow to Scapa Flow.
3 Feb.	*Sphinx*	Minesweeper	875	Off Kinnaird Head	He 111 of KG 26	Taken in tow, but capsized next day.
9 Feb.	*Fort Royal*	Mine-sweeping trawler	351	Off Aberdeen	He 111 of KG 26	Attacked by two aircraft. Struck by two bombs. 7 killed.
9 Feb.	*Robert Bowen*	Mine-sweeping trawler	290	Off Aberdeen	Aircraft	Attacked by two aircraft. Struck by one bomb. 14 killed, no survivors.
15 Feb.	*Peridot*	A/S trawler	550	Off Dover	Floating mine	No casualties. Sunk while in tow.
18 Feb.	*Daring*	Destroyer	1,370	North Sea off Shetland	*U23* Kretschmer	Torpedoed while escorting convoy HN-12. 157 killed, 15 survivors.
20 Feb.	*Fifeshire*	A/S trawler	540	E of Copinsay Island	He 111 of KG 26	Attacked by two aircraft. Struck by two bombs. 21 killed, 1 survivor.
23 Feb.	*Benvolio*	Mine-sweeping trawler	352	Mouth of Humber	Mine	10 killed, 5 survivors.
16 Mar.	*Maida*	Armed drifter	107	Goodwins	Mine	6 killed, 6 rescued.
23 Mar.	*Loch Assater*	Armed patrol vessel	210	N of Kinnaird Head	Mine	No casualties. Probably British mine.
8 Apr.	*Glowworm*	Destroyer	1,345	Off mid Norway	*Admiral Hipper*	Sunk by gunfire. 118 killed, 38 POW.

— Appendix C —
Kriegsmarine Ships Deployed in Poland

Overall Naval Command:

Generaladmiral Albrecht, Gruppenkommando Ost, Schwinemünde

Linienschiff *Schleswig-Holstein*, Kapitän zur See Gustav Kleikamp
Linienschiff *Schlesien*, Kapitän zur See Kurt Utke

BdA Vizeadmiral Hermann Densch

Köln, Kapitän zur See Theodor Burchardi
Leipzig, Kapitän zur See Heinz Nordmann
Nürnberg, Kapitän zur See Otto Klüber

FdT Konteradmiral Günther Lütjens

Z1 ***Leberecht Maass***, (Führerboot), Korvettenkapitän Friedrich Bassenge
Z2 ***Georg Thiele***, Korvettenkapitän Max Eckart Wolff
Z4 ***Richard Beitzen***, Korvettenkapitän Moritz Schmidt
Z14 ***Friedrich Ihn***, Korvettenkapitän Rudolf von Pufendorf
Z15 ***Erich Steinbrinck***, Korvettenkapitän Rolf Johannesson
Z16 ***Friedrich Eckoldt***, Korvettenkapitän Alfred Schemmel
Z8 ***Bruno Heinemann***, Korvettenkapitän Georg Langheld
Z9 ***Wolfgang Zenker***, Korvettenkapitän Gottfried Pönitz
Z10 ***Hans Lody***, Korvettenkapitän Hubert Wangenheim
Z11 ***Bernd v. Arnim***, Korvettenkapitän Kurt Rechel

1. Schnellboot-Flottille Kapitänleutnant Kurt Sturm.

S11, *S12*, *S18*, *S19*, *S20*, *S21*, *S22*, *S23*
Begleitschiff: Zingtao

FdM Kapitän zur See Friedrich Ruge
T196 (Führerboot)

Geleitflottille:
F7, Oberleutnant zur See Hans-Werner Neumann
F8, Kapitänleutnant Peter Reichmann
F9, Kapitänleutnant Paul Morgenstern
F10, Kapitänleutnant Hermann Knuth

1. Minensuchflottille
M8, Oberleutnant zur See Kurt Birr
M1, Oberleutnant zur See Hans Bartels
M3, Kapitänleutnant Waldemar Holst
M4, Oberleutnant zur See Günter Seibicke
M5, Oberleutnant zur See Rainer Dierksen
M7, Oberleutnant zur See Heinrich Timm

Sperr-Versuchs-Kommando SVK-Verband
Nautilus, Otto Braun, Pelikan, Arkona, Sundewall (old minesweepers)
M111 and *M132*, transferred from 1. Minensuchflottille

3. Minenraumboots-Flottille – *Von den Groeben* (depot ship)
R33, *R34*, *R35*, *R36*, *R38*, *R39*, *R40*

From 5 September replaced by:
1. Minenraumboots-Flottille – *Nettlebeck* (depot ship)
R18, *R19*, *R20*, *R21*, *R22*, *R23*, *R24*

7. Minensuchflottille arrived on 5 September

M75, *M84*, *M85 M102*, *M122*, *M126*

FdU Kapitän zur See **Karl Dönitz**

U31, Kapitänleutnant Johannes Habekost
U32, Kapitänleutnant Paul Büchel
U35, Kapitänleutnant Werner Lott
U14, Kapitänleutnant Horst Wellner
U18, Kapitänleutnant Max Hermann Bauer
U22, Kapitänleutnant Werner Winter
U57, Oberleutnant zur See Klaus Korth
U5, Kapitänleutnant Günter Kutschmann
U6, Oberleutnant zur See Joachim Matz
U7, Oberleutnant zur See Otto Salman

Auxiliary guard vessels temporarily deployed in Danzig Bay in second half of September *Drache, Fuchs, Siegfried* and *Möwe*

— Appendix D —
Main Ships of the Polish Navy, September 1939

Commander-in-Chief (in Warsaw): Kadm Jerzy Swirsky
Fleet Commader (in Gdymia): Kadm Jozef Michal Unrug

	Commander	*Armament*	*Displ./Speed/ Crew*	*Fate*
***Gryf*-class minelayer**				
Gryf	Lieutenant Commander Stefan Kwiatkowski	6x120-mm, 4x40-mm, 4x13.2-mm, 600 mines	2,227 ton/20 knots/122	Sunk 3 September 1939.
***Wicher*-class destroyers**				
Wicher	Lieutenant Commander Stefan de Walden	4x130-mm, 2x40-mm, 4x13.2-mm, 2 triple torpedo mounts, 60 mines	1,920 ton/33 knots/155	Sunk 3 September 1939 at Hela.
Burza	Lieutenant Commander Stanisław Nahorski	4x130-mm, 2x40-mm, 4x13.2-mm, 2 triple torpedo mounts, 60 mines	1920 ton/33 knots/155	Escaped to Britain.
***Grom*-class destroyers**				
Grom	Commander Włodzimierz Hulewicz	7x120-mm, 4x40-mm, 2x13.2-mm, 2 triple torpedo mounts, 40 depth charges (44 mines)	2144 ton/39 knots/180	Escaped to Britain. Sunk at Narvik 4 May 1940.
Błyskawica	Commander Włodzimierz Kodrębski	7x120-mm, 4x40-mm, 2x13.2-mm, 2 triple torpedo mounts, 40 depth charges (44 mines)	2144 ton/39 knots/180	Escaped to Britain.
***Orzeł*-class submarines**				
Orzeł	Lieutenant Commander Henryk Kłoczkowski	1x105-mm, 2x40-mm, 1x13.2-mm, 12 torpedo tubes, 20 torpedoes	1,138–1,473 tons/19–9 knots/60	Escaped to Britain. Disappeared in Skagerrak in late May.
Sęp	Commander Władysław Salamon	1x105-mm, 2x40-mm, 1x13.2-mm, 12 torpedo tubes, 20 torpedoes	1,138–1,437 tons/19–9 knots/60	Interned in Sweden.
***Wilk*-class submarines**				
Wilk	Commander Boguslaw Krawczyk	1x100-mm, 2x13.2-mm, 4+2 torpedo tubes, 10 torpedoes, 40 mines	980–1,250 tons/14–9 knots/54	Escaped to Britain.
Ryś	Lieutenant Commander Alexander Grochowski	1x100-mm, 2x13.2-mm, 4+2 torpedo tubes, 10 torpedoes, 40 mines	980–1,250 tons/14–9 knots/54	Interned in Sweden.
Żbik	Lieutenant Commander Michael Zebrowski	1x100-mm, 2x13.2-mm, 4+2 torpedo tubes, 10 torpedoes, 40 mines	980–1,250 tons/14–9 knots/54	Interned in Sweden.

	Commander	*Armament*	*Displ./Speed/ Crew*	*Fate*
***Jaskółka*-class minesweepers**				
Jaskółka	Kap Marynarki Tadeusz	1x75-mm, 1x13.2-mm,	185 tons/18	Destroyed at

	Borysiewicz	2x7.6-mm, 20 depth charges, 20 mines	knots/30	Jastarnia 14 September.
Rybitwa		1x75-mm, 1x13.2-mm, 2x7.6-mm, 20 depth charges, 20 mines	185 tons/18 knots/30	Scuttled at Hela 2 October.
Mewa		1x75-mm, 1x13.2-mm, 2x7.6-mm, 20 depth charges, 20 mines	185 tons/18 knots/30	Sunk at Hela by German aircraft 3 September.
Czajka		1x75-mm, 1x13.2-mm, 2x7.6mm, 20 depth charges, 20 mines	185 tons/18 knots/30	Scuttled at Hela 2 October. Raised and served as German *Westerplatte*.
Żuraw		1x75-mm, 2x13.2-mm, 2x7.6-mm, 20 depth charges, 20 mines	185 tons/18 knots/30	Scuttled at Hela 2 October. Raised and served as German *Oxhöft*.
Czapla	Kap Marynarki Eligiusz Cecniowski	1x75-mm, 2x13.2-mm, 2x7.6-mm, 20 depth charges, 20 mines	185 tons/18 knots/30	Destroyed at Jastarnia 14 September.
Komendant Piłsudski		2x76-mm, 4 MGs, 30 mines	342 tons/14.5 knots/60	Scuttled at Hela 30 September.
Generał Haller	Kap Marynarki Stanislaw Mieszkowski	2x76-mm, 4 MGs, 30 mines	342 tons/14.5 knots/60	Bombed at Hela on 3 September, sunk on 6th.
Kujawiak		1x75-mm, 2x7.92-mm	335 tons	Ex-German WWI torpedo boat *A68*. Used as floating oil tank in Gedingen.
Mazur	Lieutenant Tadeusz Rutkowski	2x47-mm, 2x 450-mm torpedo tubes	421 tons/27 knots/80	Ex-German WWI torpedo boat *V105*. Sunk by German aircraft at Oxhöft 1 September.

— Appendix E —
German Destroyers and Torpedo Boats in Commission by 1939

	Class *In service*	*Commanders* *Sept. 1939–Apr. 1940*	*Pennant*	*Fate*
Z1 *Leberecht Maass*	1934 Jan. 1937	KKpt Fritz Bassenge	-	Bombed and sunk by own aircraft 22 Feb. 1940 off Borkum.
Z2 *Georg Thiele*	1934 Feb. 1937	KKpt Max-Eckart Wolff	13	Lost at Narvik 13 Apr. 1940.
Z3 *Max Schultz*	1934 Apr. 1937	KKpt Claus Trampedach	12	Sunk by mine 22 Feb. 1940 off Borkum.
Z4 *Richard Beitzen*	1934 May 1937	KKpt Moritz Schmidt Nov. 39: FKpt Hans v. Davidsohn	11	Broken up in UK 1949.
Z5 *Paul Jacobi*	1934A Jun. 1937	FKpt Hans Georg Zimmer	21	Taken over by French Navy. Paid off February 1954.
Z6 *Theodor Riedel*	1934A Jul. 1937	KKpt Gerhard Böhmig	22	Taken over by French Navy. Paid off April 1957.
Z7 *Hermann Schoemann*	1934A Sept. 1937	KKpt Theodor Detmers	23	Scuttled in Barents Sea May 1942.
Z8 *Bruno Heinemann*	1934A Jan. 1938	KKpt Georg Langheld Apr. 1940: KKpt Herrmann Alberts	63,61	Mined in the Channel Jan. 1942.
Z9 *Wolfgang Zenker*	1934A Jul. 38	FKpt Gottfried Pönitz	61, 62, 63	Lost at Narvik 13 Apr. 1940.
Z10 *Hans Lody*	1934A Sept. 1938	KKpt Hubert Freiherr v. Wangenheim	81, 62, 61	Broken up in UK 1949.
Z11 *Bernd v. Arnim*	1934A Dec. 1938	KKpt Kurt Rechel	63, 62	Lost at Narvik 13 Apr. 1940.
Z12 *Erich Giese*	1934A Mar. 1939	KKpt Karl Schmidt	82	Lost at Narvik 13 Apr. 1940.
Z13 *Erich Koellner*	1934A Sept. 1939	FKpt Alfred Schultze-Hinrichs	83	Lost at Narvik 13 Apr. 1940.
Z14 *Friedrich Ihn*	1934A Apr. 1938	FKpt Rudolf v. Pufendorf Oct. 1939: KKpt Günther Wachsmuth	32, 33	Broken up in USSR 1960s.

	Class *In service*	*Commanders* *Sept. 1939–Apr. 1940*	*Pennant*	*Fate*
Z15	1934A	FKpt Rudolf [illegible]	31, 32	Broken up in

Z15 *Erich Steinbrinck*	1934A May 1938	FKpt Rolf Johannesson	31, 32	Broken up in USSR 1960s.
Z16 *Friedrich Eckoldt*	1934A Aug. 38	FKpt Alfred Schemmel	33, 32, 31	Sunk in the Barents Sea Dec. 1942.
Z17 *Diether v. Roeder*	1936 Aug. 1938	KKpt Erich Holtorf	51	Lost at Narvik 13 Apr. 1940.
Z18 *Hans Lüdemann*	1936 Sept. 1938	KKpt Herbert Friedrichs	53	Lost at Narvik 13 Apr. 1940.
Z19 *Hermann Künne*	1936 Jan. 1939	KKpt Friedrich Kothe	52	Lost at Narvik 13 Apr. 1940.
Z20 *Karl Galster*	1936 Mar. 1939	KKpt Freiherr Theodor v. Mauchenheim, genannt v. Bechtolsheim	42	Broken up in USSR 1960s.
Z21 *Wilhelm Heidkamp*	1936 Jun. 1939	KKpt Hans Erdmenger	42	Lost at Narvik 10 Apr. 1940.
Z22 *Anton Schmitt*	1936 Sept. 1939	KKpt Friedrich Böhme	41	Lost at Narvik 10 Apr. 1940.
Möwe	*Raubvogel* Oct. 1926	KptLt Edler v. Rennenkampf Mar. 1940: KptLt Neuss	MÖ	Sunk at Le Havre 14 June 1944.
Seeadler	*Raubvogel* Mar. 1927	KptLt Hartenstein Nov. 1939: KptLt Kohlauf	SE	Sunk by British MTBs off Boulogne 14 May 1942.
Greif	*Raubvogel* Mar. 1927	KptLt Verlohr Nov. 1939: KptLt Freiherr v. Lyncker	GR	Sunk Seine Bay 24 May 1944.
Albatros	*Raubvogel* May 1928	KptLt H M Schultz Dec. 1939: KptLt Strelow	AT	Lost in Oslofjord 10 Apr. 1940.
Falke	*Raubvogel* Jul. 1928	KptLt Hessler Mar. 40: KptLt Hansen-Nootbaar	FK	Sunk at Le Havre 14 June 1944.
Kondor	*Raubvogel* Jul. 1928	KptLt Wilcke	KO	Mined and scrapped May 1944.
Wolf	*Raubtier* Nov. 1928	KptLt Gerstung Jan. 1940: Lt Bruder Peters	WL	Mined and sunk off Dunkirk 8 Jan. 1941.

	Class *In service*	*Commanders* *Sept. 1939–Apr. 1940*	*Pennant*	*Fate*
Iltis	*Raubtier* Oct. 1928	KptLt Schuur	IT	Sunk by British MTBs off Boulogne 14 May 1942.
Jaguar	*Raubtier* Aug. 1929	KptLt Kohlauf Oct. 1939: KptLt Hartenstein	JA	Sunk at Le Havre 14 June 1944
Leopard	*Raubtier* Jun. 1929	KptLt Kassbaum Oct. 1939: KptLt Trummer	LP	Sunk after collision with *Preussen*. Skagerrak 30 Apr. 1940.
Luchs	*Raubtier* Apr. 1929	KptLt Prölls Oct. 1939: KptLt Kassbaum	LU	Torpedoed by *Thames* off Stavanger 26 July 1940.
Tiger	*Raubtier* Jan. 1929	KptLt Neuss	TG	Sunk after collision with *Max Schultz*, Baltic, 25 Sept. 1939.

FKpt=Fregattenkapitän; KKpt= Korvettenkapitän; Kptlt = Kapitänleutnant; Lt=Leutnant.

Modified from: Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945;* Elfrath, *Deutsche Zerstörer 1934–1945*, and Whitley, *German Destroyers of World War Two*.

The pennants or ‘tactical numbers’ were painted on the side of the boats. For the destroyers, the numbers referred to the division and the tactical position within the unit. Hence, 51 signifies boat number one, the division leader, in the fifth division. For the torpedo boats, the letters reflect the name. All pennants were painted over, by order of the OKM, in early November 1939.

— Appendix F —
German Ships Intercepted by the Royal Navy, September 1939–March 1940

Date	*Ship*	*Tons*	*Place*	*Intercepted by*	*Fate*
1939					
3 Sept.	*Hannah Böge*	2,377	S of Iceland	*Somali*	Taken as prize to Kirkwall. Sunk as *Crown Arun* by *U99* in Sept. 1940.

Date	*Ship*	*Tons*	*Place*	*Intercepted by*	*Fate*
3 Sept.	*Olinda*	4,576	Off River Plate	*Ajax*	Sunk as no prize crew available.
4 Sept.	*Carl Fritzen*	6,594	Off Montevideo	*Ajax*	Sunk as no prize crew available.
4 Sept.	*Johannes Molkenbuhr*	5,292	Off Stadlandet	*Southampton* and *Jervis*	Scuttled and sunk by gunfire.
5 Sept.	*Inn*	2,867	West of Canary Islands	*Neptune*	Scuttled.
24 Sept.	*Minden*	4,160	Off Faeroes	*Calypso*	Scuttled.
9 Oct.	*Cap Norte*	13,615	Between Orkneys and Iceland	*Belfast*	Taken as prize to Leith, later towed to Kirkwall. Taken into British service as *Empire Trooper*.
19 Oct.	*Gonzenheim*	4,574	SE of Iceland	*Rawalpindi*	Scuttled.
19 Oct.	*Biscaya*	6,386	Denmark Strait	*Scotstoun*	Taken as prize to Leith.
20 Oct.	*Bianca*	1,375	Denmark Strait	*Transylvania*	Taken as prize to Leith.
21 Oct.	*Poseidon*	5,864	Denmark Strait	*Scotstoun*	Sunk by gunfire from *Transylvania* on the 26th after unsuccessful prize recovery, including towing.
21 Oct.	*Gloria*	5,896	Denmark Strait	*Sheffield*	Taken as prize to Kirkwall

					Kirkwall.
25 Oct.	*Rheingold*	5,055	SE of Iceland	*Delhi*	Taken as prize to Kirkwall.
12 Nov.	*Mecklenburg*	7,892	E of Iceland	*Delhi*	Scuttled.
13 Nov.	*Parana*	6,038	W of Iceland	*Newcastle*	Scuttled.
17 Nov.	*Henning Oldendorff*	3,986	SE of Iceland	*Colombo*	Taken as prize to Kirkwall.
19 Nov.	*Eilbek*	2,185	NW of Ireland	*Scotstoun*	Taken as prize to the Clyde.
20 Nov.	*Bertha Fisser*	4,110	SE of Iceland	*Chitral*	Scuttled and shelled by *Chitral*. Drifted ashore on Iceland.
21 Nov.	*Tenerife*	4,996	S of Iceland	*Transylvania*	Scuttled.
22 Nov.	*Adolph Woermann*	8,577	Off Ascension Island	*Neptune*	Scuttled.
22 Nov.	*Konsul Hendrik Fisser*	4,458	Off Faeroes	*Calypso*	Taken as prize to Leith.
23 Nov.	*Antiochia*	3,106	S of Faeroes	*Laurentic*	Scuttled.

Date	*Ship*	*Tons*	*Place*	*Intercepted by*	*Fate*
23 Nov.	*Borkum*	3,670	Denmark Strait	*California*	Taken as prize. Shelled by *U33* and grounded in Papa Sound. Scrapped.
19 Dec.	*Columbus*	32,354	320 miles E of Cape May, Virginia USA	*Hyperion*	Scuttled when intercepted. 3 killed, 576 survivors rescued by US cruiser *Tuscaloosa*.
1940					
13 Feb.	*Wakama*	3,771	Off Cape Frio, Brazil	*Devonshire*	Scuttled.
21 Feb.	*Wahehe*	4,709	S of Iceland	*Manchester and Kimberley*	Taken as prize to Kirkwall.
1 Mar.	*Troja*	2,391	Off Aruba	*Despatch*	Scuttled.
2 Mar.	*Heidelberg*	6,530	Caribbean	*Dunedin*	Scuttled.
2 Mar.	*Wolfsburg*	6,201	Denmark Strait	*Berwick*	Scuttled.
3 Mar.	*Arucas*	3,369	SE of Iceland	*York*	Scuttled and sunk by gunfire.
6 Mar.	*Uruguay*	5,846	Denmark Strait	*Berwick*	Scuttled and sunk by gunfire.
13 Mar.	*La Corunna*	7,414	E of Iceland	*Maloja*	Scuttled and sunk by gunfire.
21 Mar.	*Heddernheim*	4,946	Skagerrak	*Ursula*	Torpedoed.
23 Mar.	*Edmund Hugo Stinnes4*	2,189	Off Jutland, Denmark	*Truant*	Torpedoed.
28 Mar.	*Mimi Horn*	4,007	Denmark Strait	*Transylvania*	Scuttled. No casualties.

Sources: NA-ADM 199/2063 and www.uboat.net.

— Appendix G —
U-Boats sunk, September 1939–April 1940

Date	*Boat/captain*	*Type*	*Sunk by*	*Position*	*Casualties*
1939					
14 Sept.	*U39* Glattes	IX	Depth-charged by destroyers *Faulknor*, *Foxhound* and *Firedrake*	Off Hebrides 58° 32' N, 11° 49' W	No casualties, 44 survivors.
20 Sept.	*U27* Franz	VIIA	Depth-charged by destroyers *Faulknor*, *Fortune* and *Forester*	Off Hebrides 58° 35' N, 09° 02' W	No casualties, 38 survivors.
8 Oct.	*U12* Ropp	IIB	Minefield, Dover Barrage	Strait of Dover	27 dead. All hands lost.
13 Oct.	*U40* Barten	IX	Minefield, Dover Barrage	Strait of Dover 50° 42' N, 00° 15' E	45 dead, 3 survivors.
13 Oct.	*U42* Dau	IX	Depth-charged by destroyers *Imogen* and *Ilex*	SW of Ireland 49° 12' N, 16° 00' W	26 dead, 17 survivors.
14 Oct.	*U45* Gelhaar	VIIB	Depth-charged by destroyers *Inglefield, Ivanhoe, Intrepid* and *Icarus*	SW of Ireland 50° 58' N, 12° 57' W	38 dead. All hands lost.
25 Oct.	*U16* Wellner	IIB	Depth-charged by A/S trawlers *Saon*, *Cayton Wyke* and sloop *Puffin*	Strait of Dover 51° 09' N, 01° 28' E	28 dead. All hands lost.
29 Nov.	*U35* Lott	VIIA	Depth-charged by destroyers *Kingston, Kashmir* and *Icarus*	E of Shetland 60° 53' N, 02° 47' E	No casualties, 43 survivors.
4 Dec.	*U36* Fröhlich	VIIA	Torpedoed by submarine *Salmon*	SW of Kristiansand 57° 00' N, 05° 20' E	40 dead. All hands lost.
1940					
30 Jan.	*U55* Heidel	VIIB	Sunk by sloop *Fowey*, destroyers *Whitshed* and *Valmy* and a Sunderland aircraft from 228 Squadron	SW Approaches 48° 37' N, 07° 48' W	1 dead, 41 survivors.
30 Jan.	*U15*	IIB	Rammed by torpedo	North Sea off Hoof-	25 dead. All

	Frahm		boat *Iltis* in accident	den	hands lost.
5 Feb.	*U41* Mugler	IX	Depth-charged by destroyer *Antelope*	S of Ireland 49° 21' N, 10° 04' W	49 dead. All hands lost.
12 Feb.	*U33* von Dresky	VIIA	Depth-charged by minesweeper *Gleaner*	Firth of Clyde 55° 25' N, 05° 07' W	25 dead, 17 survivors.
~ 20 Feb.	*U54* Kutschmann	VIIB	Unknown, probably minefield	Heligoland Bight	41 dead. All hands lost.
24 Feb.	*U53* Grosse	VIIB	Depth-charged by destroyer *Gurkha*	S of Faeroes 60° 32' N, 06° 14' W	42 dead. All hands lost.
25 Feb.	*U63* Lorentz	IIC	Depth-charged by destroyers *Escort*, *Inglefield* and *Imogen*. Possibly also torpedoed by submarine *Narwhal*	S of Shetland 58° 40' N, 00° 10' W	1 dead, 24 survivors.
11 Mar.	*U31* Habekost	VIIA	Sunk by RAF aircraft. Recovered and recommissioned in July	Heligoland Bight	58 dead. All hands lost.
13 Mar.	*U44* Mathes	IX	Minefield. Most likely Field No. 7	Off Terschelling	47 dead. All hands lost.

Date	*Boat/captain*	*Type*	*Sunk by*	*Position*	*Casualties*
27 Mar.	*U22* Jenisch	IIB	Unknown, possibly minefield or collision with Polish submarine *Wilk*	North Sea or Skagerrak	27 dead. All hands lost.
~ 6 Apr.	*U1* Deecke	IIA	Minefield. Either Field No. 7 or mines laid by submarine *Narwhal*	North Sea	24 dead. All hands lost.
6 Apr.	*U50* Bauer	VIIB	Minefield. Most likely Field No. 7	North Sea, Off Terschelling	44 dead. All hands lost.

— Appendix H —
German Destroyer Mine-laying Operations, 1939 and 1940

Date *C-in-C*	*Zerstörers*	*Area*	*Results (most likely)*
17/18 Oct. Vizeadmiral Lütjens	*Wilhelm Heidkamp* *Hermann Künne* *Friedrich Eckholdt* *Diether von Roeder* *Karl Galster* *Hans Lüdemann*	Humber Estuary	7 ships totalling 25,825 tons
12/13 Nov. Kapitän zur See Bonte	*Wilhelm Heidkamp* *Karl Galster* *Hermann Künne* *Hans Lüdemann*	Thames Estuary	13 ships totalling 48,728 tons Destroyer *Blanche* Minelayer *Adventure* damaged
17/18 Nov. Fregattenkapitän Hartmann	*Hermann Künne* *Bernd von Arnim* *Wilhelm Heidkamp*	Thames Estuary	7 ships totalling 27,565 tons Trawler *Mastiff*
18/19 Nov. Fregattenkapitän Bey	*Erich Steinbrinck* *Friedrich Eckholdt* *Hans Lody*	Humber Estuary	7 ships totalling 38,710 tons
6/7 Dec. Fregattenkapitän Bey	*Erich Giese* *Hans Lody*	Off Cromer	2 ships totalling 5,286 tons
12/13 Dec. Kapitän zur See Bonte	*Friedrich Ihn* *Richard Beitzen* *Erich Steinbrinck* *Bruno Heinemann* *Hermann Künne*	Off Newcastle	11 ships totalling 18,979 tons Trawlers *William Hallett*, *James Ludford* and *Sedgefly*
6/7 Jan. Fregattenkapitän Berger	*Friedrich Eckholdt* *Erich Steinbrinck* *Friedrich Ihn*	Thames Estuary	6 ships totalling 21,617 tons Destroyer *Grenville*

Date *C-in-C*	*Zerstörers*	*Area*	*Results (most likely)*
10/11 Jan. Kapitän zur See Bonte	*Wilhelm Heidkamp* *Karl Galster* *Anton Schmitt* *Friedrich Eckholdt* *Richard Beitzen* *Friedrich Ihn*	Off Newcastle	1 ship of 251 tons
10/11 Jan. Fregattenkapitän Bey	*Bruno Heinemann* *Wolfgang Zenker* *Erich Koellner*	Off Cromer	3 ships totalling 11,155 tons
9/10 Feb. Fregattenkapitän Berger	*Friedrich Eckholdt* *Richard Beitzen* *Max Schultz*	Thames Estuary	6 ships totalling 28,496 tons
9/10 Feb. Fregattenkapitän Bey	*Bruno Heinemann* *Wolfgang Zenker* *Erich Koellner*	Haisborough Sands, off Cromer	3 ships totalling 11,885 tons

Sources: Hervieux, *German Destroyer Minelaying Operations off the English Coast* and Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945*.

— Appendix I —
German Minelayers in Commission, Autumn 1939–Spring 1940

Ship	*Tons*	*Armament and mines*	*Commander 1939/40*	*Fate*
Roland	2,436	2x88-mm, 1x37-mm, 2x20-mm	KKpt F Pretzel, Dec.: KKpt K Kutzleben	Hit mine and sank off Narva Apr. 1944.
Cobra	2,131	2x88-mm; 400 mines	KptLt G Bidlingsmaier, Jan.: KptLt K F Brill	Bombed and sunk at yard in Holland Aug. 1942.
Hansestadt Danzig	2,431	2x88-mm, 4x37mm; 360 mines	FKpt Hans Howaldt, Sept.: KKpt W Schroeder	Sunk 9 July 1941 in Baltic by Swedish mines.
Tannenberg	5,504	3x15-cm, 4x37-mm, 6x20-mm; 460 mines	KKpt von Jagow, later: FKpt von Schönermark	Sunk 9 July 1941 in Baltic by Swedish mines.
Kaiser	1,912	2x88-mm, 2x37-mm; 200 mines	KptLt C Kircheiss, Sept. KptLt H Bohm	Survived the war.
Königin Luise	2,399	2x88-mm, 1x37-mm, 2x20-mm; 240 mines		Sunk Sept. 1941 in Baltic by Russian mines
Preussen	2,529	2x88-mm; 400 mines	KKpt Freiherr von der Recke	Sunk 9 July 1941 in Baltic by Swedish mines.
Bremse	1,870	4x12.7-cm, 8x20-mm; 350 mines		Sunk northern Norway 1941.
Brummer	3,010	4x10.5-cm, 4x37-mm; 450 mines	Kpt z See Leithäuser	Sunk 15 Apr. 1940 in Kattegat by British submarine *Sterlet*.
Grille	3,430	3x12.7-cm, 4x37-mm, 4x20-mm; 280 mines		Mostly used for purposes other than mine-laying after 1939.

FKpt=Fregattenkapitän; KKpt=Korvettenkapitän; Kptlt=Kapitänleutnant; Kpt z See= Kapitän zur See.

In addition, all destroyers and most submarines could carry and lay mines.

— Appendix J —
British Minelayers in Commission, Autumn 1939–Spring 1940

Ship	*Displacement tons*	*Armament and mines*	*Commander 1939/40*	*Fate*
Hampton	2,839	1x4-inch, 2x.303-inch; 270 mines	Capt George H Freyberg	Converted to AMC in Sept. 1940.
Shepperton	2,839	1x4-inch, 2x.303-inch; 270 mines		Converted to AMC in Sept. 1940.
Princess Victoria	2,197	1x4-inch, 2x12-pound; 244 mines	Lt Cdr Paul M Chavasse Nov.: Capt John B Hall	Mined and sunk in Humber Estuary 19 May 1940.
Teviot Bank	5,087	1x4-inch, 1x12-pound, 24.5-inch; 280 mines	Cdr Robert D King-Hartman	Decommissioned 1946.
Adventure	6,740	4x4.7-inch, 8x2-pound, 10xMG; 280 large mines or 340 small	Capt Arthur R Halfhide	Converted to repair ship in Mar. 1944.
Plover	805	2x.303-inch; 100 mines	Lt Cdr Adelbert Nicholson	Scrapped 1969
M1	300	1x20-mm, 2x.303-inch; 10 mines	Lt Robert D Cooper	Commissioned Oct. 1939. Sold 1967.
M2	300	1x20-mm, 2x.303-inch; 10 mines	Lt John P Thomas	Commissioned Jan. 1940. Scrapped 1970.
M3	300	1x20-mm, 2x.303-inch; 10 mines	Lt Leslie A Martin	Commissioned Mar. 1940. Scrapped 1972.

Capt=Captain; Cdr=Commander; Lt Cdr=Lieutenant Commander.

In addition, six destroyers (Esk, *Express, Intrepid, Ivanhoe, Icarus* and *Impulsive*) and five submarines (*Porpoise, Seal, Grampus, Cachalot, Narwhal*) could lay mines.

— Appendix K —
Armed Merchant Cruisers in the Royal Navy 1939–40

Ship	*Tonnage Built*	*Armament*	*Area of Activity*
Alaunia	14,030 1925	8-6-inch guns	Halifax Escort Force – North Atlantic. Later Eastern Fleet.
Alcantara	22,209 1926	8-6-inch guns	South America Division. Damaged in action with German raider *Thor* July 1940. Later West Africa Command. Converted to troopship 1944.
Andania	13,950 1922	8-6-inch guns	Northern Patrol. Torpedoed and sunk by *UA* 16 June 1940 south of Iceland. Captain Donald Bain.
Antenor	11,174 1925	6-6-inch guns	Mediterranean, later East Indies station. Converted to troop transport 1942.
Arawa	14,462 1922	7-6-inch guns	China Station, later South Atlantic. Converted to troop transport 1941.
Ascania	14,013 1925	8-6-inch guns	Halifax Escort Force – North Atlantic.
Asturias	22,048 1925	8-6-inch guns	Northern Patrol.
Aurania	13,984 1924	8-6-inch guns	Northern Patrol.
Ausonia	13,912 1921	8-6-inch guns	Halifax Escort Force – North Atlantic.
Bulolo	6,500 1938	7-6-inch guns	South Atlantic – Sierra Leone Convoys.
California	16,792 1923	8-6-inch guns	Northern Patrol. Later South America Division.
Canton	15,700 1938	8-6-inch guns	Northern Patrol. Later South America Division.
Carinthia	20,277 1925	8-6-inch guns	Northern Patrol. Captain John F Barrett. Torpedoed 6 June 1940 by *U46.*
Carnarvon Castle	20,063 1926	8-6-inch guns	South Atlantic – Sierra Leone Convoys.
Carthage	14,182 1931	8-6-inch guns	East Indies Station.
Cathay	15,225 1925	8-6-inch guns	East Indies Station.
Cheshire	10,520 1927	6-6-inch guns	South Atlantic – Sierra Leone Convoys.
Chitral	15,346 1925	8-6-inch guns	Northern Patrol.
Cilicia	11,137 1938	8-6-inch guns	Northern Patrol.

| *Ship* | *Tonnage Built* | *Armament* | *Area of Activity* |

Circassia	11,137 1937	8-6-inch guns	Northern Patrol.
Comorin	15,341 1925	8-6-inch guns	South Africa. Captain John I Hallett. Caught fire and sunk 6 Apr. 1941.
Corfu	14,170 1931	8-6-inch guns	Northern Patrol.
Derbyshire	11,650 1935	6-6-inch guns	Northern Patrol.
Dunnottar Castle	15,007 1935	7-6-inch guns	South Atlantic – Sierra Leone Convoys.
Dunvegan Castle	15,007 1935	7-6-inch guns	South Atlantic – Sierra Leone Convoys. Captain Hubert Ardill. Sunk 27 Aug. 1940 by *U46.*
Esperance Bay	14,204 1922	7-6-inch guns	South Atlantic – Sierra Leone Convoys.
Forfar Ex *Montrose*	16,402 1922	8-6-inch guns	Northern Patrol. Captain Henry N Lake. From July 1940, Captain Norman A Hardy. Sunk 2 Dec. 1940 by U99.
Hector	11,198 1924	6-6-inch guns	New Zealand Station. Captain Robin Lloyd. From Aug. 1940, Captain Francis Howard. Bombed by Japanese aircraft in Apr. 1942 in Colombo Harbour. Abandoned.
Jervis Bay	14,164 1922	7-6-inch guns	Northern Patrol. Captain Arthur G Harris. From Feb. 1940 Captain Edward S Fegen. Sunk 5 Nov. 1940 by *Admiral Scheer.*
Kanimbla	10,985 1935	7-6-inch guns	China Station.
Laconia	19,695 1922	8-6-inch guns	Halifax Escort Force. Northern Patrol.
Laurentic	18,724 1927	7-6-inch guns	Northern Patrol. Captain Eric P Vivian. Sunk 3 Nov. 1940 by *U99.*
Letitia	13,475 1925	8-6-inch guns	Halifax Escort Force. Northern Patrol.
Maloja	20,914 1923	8-6-inch guns	East Indies. Northern Patrol.
Montclare	16,314 1922	7-6-inch guns	Northern Patrol.
Mooltan	20,952 1923	8-6-inch guns	Northern Patrol. South Atlantic – Sierra Leone Convoys.
Moreton Bay	14,193 1921	7-6-inch guns	China Station.
Patroclus	11,314 1923	8-6-inch guns	Northern Patrol. Captain Gerald C Wynter. Sunk 4 Nov. 1940 by *U99.*
Pretoria Castle	17,160 1939	8-6-inch guns	South Atlantic – Sierra Leone Convoys.
Queen of Bermuda	22,575 1932	7-6-inch guns	Northern Patrol. South America Division.

Ship	*Tonnage Built*	*Armament*	*Area of Activity*
Rajputana	16,644 1926	8-6-inch guns	West Coast of South America. West Indies Station. Halifax Escort Force. Captain Frederick H Taylor. Sunk 13 Apr. 1941 by *U108*.
Ranchi	16,738 1925	8-6-inch guns	East Indies.
Ranpura	16,688 1925	8-6-inch guns	South Atlantic – Sierra Leone Convoys.
Rawalpindi	16,697 1925	8-6-inch guns	Northern Patrol. Captain Edward Kennedy. Sunk 23 Nov. 1939 by *Scharnhorst* and *Gneisenau*.
Salopian Ex *Shropshire*	10,515 1926	6-6-inch guns	South Atlantic – Sierra Leone Convoys. Northern Patrol. North Atlantic Escort Force. Captain John P Farquharson. From Mar. 1940, Captain John Alleyne. Sunk 13 May 1941 by *U98*.
Scotstoun Ex *Caledonia*	17,046 1925	8-6-inch guns	Northern Patrol. Captain Sydney K Smyth. Torpedoed 13 June 1940 by *U25*.
Transylvania	16,923 1925	8-6-inch guns	Northern Patrol. Captain Francis N Miles. Sunk 10 Aug. 1940 by *U56*.
Voltaire	13,245 1923	8-6-inch guns	Mediterranean Station, later Halifax Escort Force. Captain Claude Bate. From Aug. 1940, Captain George Fryberg. From Sept. 1940, Captain James A Blackburn. Sunk Apr. 1941 by raider *Thor*.
Wolfe Ex *Montcalm*			Northern Patrol
Worcestershire	11,402 1930	6-6-inch guns	Northern Patrol.

Sources: NA-ADM 116/4182 and www.uboat.net

NB: Only captains active in 1940 are listed.

— Appendix L —
Northern Patrol 6-inch Cruisers, 1939

7th Cruiser Squadron

Diomede	Captain E B C Dicken	Transferred to West Indies in Jan. 1940. Used for training from Aug. 1943.
Dragon	Captain R G Bowes-Lyon	Withdrawn from Northern Patrol in Dec. 1939, transferred to Mediterranean and South Atlantic. Transferred to Polish Navy 1943 after refit.
Calypso	Captain N J W William-Powlet	Nominated for refit Nov. 1939 and thereafter transferred to Mediterranean. Sunk by Italian submarine *Bagnolini* S of Crete 12 June 1940.
Caledon	Captain C P Clark	Transfer to 11th Cruiser Squadron in Oct. To the Mediterranean in Dec. 1939. Reserve in 1945.

11th Cruiser Squadron

Cardiff	Captain P K Enright	Withdrawn from Northern Patrol in Dec. 1939. Transferred to Home Fleet and deployed for convoy escort. Training duties from end 1940.
Delhi	Captain L H K Hamilton	Transferred to Gibraltar in Feb. 1940. Served in Mediterranean and South Atlantic. Reserve in 1945.
Dunedin	Captain C E Lambe	Transferred to West Indies in Jan. 1940. Sunk 24 Nov. 1941 by *U124* N of Pernambuco.
Ceres		Transferred to China Station in Feb. 1940.
Colombo	Captain Richard Scott	Transferred to Mediterranean in Feb. 1940. Reserve July 1945.

12th Cruiser Squadron

Effingham	Captain J M Howson	Transferred to Atlantic convoy duty in October 1939. Ran aground and sank in Norway, May 1940.
Emerald	Captain A W S Agar	Transferred to South American Division in Oct. 1939. Served in East Indies until laid up in 1944.
Enterprise	Captain H J Egerton	Transferred to West Indies in Oct. Served in Atlantic and Indian Ocean until reserve in 1944.

Main source: www.naval-history.net.

— Appendix M —
Iron Ore Shipments from Narvik, August 1939–March 1940, in Tons

	To Germany	*To Britain*	*Others*
1939			
Aug.	492,091	152,822	50,000
Sept.	70,418	20,893	66,800
Oct.	16,286	117,363	100,515
Nov.	75,383	59,408	113,786
Dec.	96,948	76,022	38,363
1940			
Jan.	281,740	148,291	105,318
Feb.	99,391	131,855	58,794
Mar.	113,957	212,960	55,000
Total Sept.–Mar.	**754,123**	**766,792**	**538,576**

Source: FO 371/24821. These are the official Norwegian numbers presented to Halifax by Colban in March 1940. Other sources have slightly different numbers, but they are of a similar order of magnitude.

— Appendix N —
Nomenclature of British Atlantic and North Sea Convoys, 1939–40

Numbers include British, Allied and Neutral ships per quarter.

Prefix	*Route*	*Number of ships* *Sept.–Dec. 1939*	*Jan.–Mar. 1940*
HX	Inbound from North America (Halifax –UK)	518	670
KJ	Kingston, Jamaica to UK, 1939 only	112	–
OA	Outbound from Southend, ceased in Oct. 1940	1,088	876
OB	Outbound for North America from Liverpool	1,023	1,068
HG	Inbound from Gibraltar	511	665
SL	Inbound from West Africa	351	248
HN	Inbound from Norway, ceased in April 1940	100	686
ON	Outbound for Norway, ceased in April 1940	32	543
	Total	3,735	4,756

Source: Grove, *The Defeat of the Enemy Attack on Shipping*.

— Appendix O —
Operation Wilfred Minefields on the Norwegian Coast, 8 April 1940

Stadtlandet – not laid

a	62° 11' 06" N	05° 06' 12" E
b	62° 09' 24" N	05° 00' 13" E
c	62° 12' 18" N	04° 49' 30" E
d	62° 19' 30" N	05° 05' 36" E
e	62° 12' 00" N	05° 09' 00" E

Bud – not laid

a	62° 58' 27" N	07° 05' 30" E
b	63° 03' 30" N	06° 54' 00" E
c	63° 07' 12" N	07° 04' 30" E
d	62° 59' 24" N	07° 07' 15" E

Vestfjorden

a	67° 24' 40" N	14° 34' 00" E
b	67° 27' 30" N	14° 24' 00" E
c	67° 28' 55" N	14° 06' 45" E
d	67° 33' 55" N	13° 51' 30" E
e	67° 37' 55" N	14° 02' 15" E
f	67° 26' 20" N	14° 38' 30" E

Abbreviations

Abbreviations

AAA	Distress signal in Morse code, signifying ‘under attack by aircraft’
A/A	Anti-aircraft
ABV	Armed boarding vessel
ACHQ	Area Combined Headquarters
ACOS	Admiral Commanding Orkneys and Shetlands
AMC	Armed merchant cruiser
AMES	Air Ministry Experimental Station
A/S	Anti-submarine (Royal Navy usage)
Asdic	Anti-submarine detection equipment, now known as sonar
B-Dienst	Beobachtungsdienst (‘observation service’) – German shipboard cryptanalyst service
BC	Bomber Command
BdA	Befehlshaber der Aufklärungsstreitkräfte (German C-in-C Reconnaissance Forces)
BDM	Bund Deutscher Mädel – a Nazi organisation for young girls, equivalent to Hitlerjugend
BdU	Befehlshaber der Unterseeboote (German C-in-C Submarines)

BrT	British time
BSO	Befehlshaber der Sicherung der Ostsee (German C-in-C Security, Baltic)
BSN	Befehlshaber der Sicherung der Nordsee (German C-in-C Security North Sea)
C-in-C	Commander-in-Chief
CID	(British) Committee of Imperial Defence
CIGS	Chief of the Imperial General Staff
CoS	Chiefs of Staffs
D/F	Direction finding
DCT	Director Control Tower
DCNS	Deputy Chief of Naval Staff
DEMS	Defensively equipped merchant ships
DFC	Distinguished Flying Cross
DNI	Director of Naval Intelligence
DRC	(British) Defence Policy and Requirements Sub-Committee
DSC	Distinguished Service Cross (British decoration)
DSO	Distinguished Service Order (British decoration)
DTMI	(British) Directorate of Torpedoes and Mining (Investigations)
DEMS	Defensively equipped merchant ships
FAA	Fleet Air Arm
FdM	Führer der Minensuchboote (German Flag Officer Minesweepers)
FdS	Führer der Sonderverbande (German Head of Special Forces)

FdT	Führer der Torpedoboote (German Flag Officer Torpedo Boats (initially also Destroyers))
FdU	Führer der Unterseeboote (German Officer Commanding Submarines)
FdZ	Führer der Zerstörers (German Flag Officer Destroyers)
FdM	Führer der Minensuchboote (German Flag Officer Minesweepers)
FdS	Führer der Sonderverbande (German Head of Special Forces)
GC&CS	Government Code and Cypher School at Bletchley Park – responsible for providing signals intelligence and information assurance to the UK government and armed forces
GeT	German time
GP	General purpose
H/F-D/F	High Frequency Direction Finding (known as ‘Huff-Duff’)
HA	High-angle
HA/LA	High-angle/low-angle, multi-purpose guns
IIWO	Second officer (German U-boat)
IWO	First officer (German U-boat
KTB	Kriegstagebuch (German war diary)
LI	Leading engineer (German U-boat)
LL or Double-L	Electrically actuated sweep for magnetic mines
LMA	Luftmine Typ A (air-dropped mine Type A)
LMB	Luftmine Typ B (air-dropped mine Type B)
MD	Minesweeping Division

MEW	Ministry of Economic Warfare
MG	Machine gun
MGB	Motor gun boat
MTB	Motor torpedo boat
NCO	Non-commissioned officer
NCSO	Naval Control Service Officer
NID	Naval Intelligence Department
NoT	Norwegian time
OBdL	Oberkommando der Luftwaffe (German Air Force High Command)
OIC	Operational Intelligence Centre
OKM	Oberkommando der Kriegsmarine (German Navy High Command)
OKW	Oberkommando der Wehrmacht (German Army High Command)
ORP	Okret Rzeczypospolitej Polskiej (Ship of the Polish Navy)
PAC	Parachute aerial cable
PIU	(British) Photographic Interpretation Unit
PO	Petty Officer
POW	Prisoner of War
PRU	(British) Photographic Reconnaissance Unit
PWM	Polska Marynarkna Wojenna (Polish Navy)
RA(S)	Rear Admiral Submarines (Royal Navy)
RAF	Royal Air Force

RDF	Radio direction finding (radar)
RLM	Reichsluftfahrtministerium (German Ministry of Aviation)
RN	Royal Navy, British Navy
RNAS	Royal Naval Air Service
RNN	Royal Norwegian Navy
RNPS	Royal Naval Patrol Service
RNR	Royal Naval Reserve
RNVR	Royal Naval Volunteer Reserve
RRR	Distress signal in Morse code, signifying ‘under attack by surface raider’, usually a warship
RWM	Reichswirtschaftministerium (German Ministry of Trade)
SDD	Sea Defence District (Norwegian)
sigint	Signals intelligence – assessment of intercepted radio traffic
SIS	Secret Intelligence Service
SKL	Seekriegsleitung (German Naval Warfare Command)
SSS	Distress signal in Morse code, signifying ‘under attack by submarine’
SVK	Sperrversuchskommando (Barrage Test Command)
SWC	Supreme War Council
TEK	Torpedo-Erprobungsanstalt (Torpedo Test Facility)
TM	Torpedo mine
TVA	Torpedo-Versuchsanstalt (Torpedo Research Institute)
UAW	Unterseebootabwehrschule (U-Boat Training School)

USW	Ultra-short wavelength – short-range radio for communication between ships
VA(S)	Vice Admiral Submarines (British)
VC	Victoria Cross
VES	Voraus-Eigenschutz (forward self-protection)
VLF	Very low frequency (radio)
WRNS	Women's Royal Naval Service
WST	Wojskowy Skład Transportowy (Polish Military Transit Depot)

German Words and Terms

Abwehr	German Military Intelligence
Auswärtiges Amt	Foreign Office
De-Te Gerät	Shipborne radar
Fliegerkorps	Air force corps
Gebirgsjäger	Mountain ranger
Grossadmiral	Grand Admiral
Hauptmann	Army Captain
Kapitän zur See	Naval Captain – Captain at Sea
Kriegsmarine	German Navy
Luftwaffe	German Air Force
R-Boot, Raumboot	Light minesweeper
Reichskanzlei	The Reich Chancellery – buildings of the German government, including Hitler's offices

S-Boot, Schnellboot	Motor torpedo boat, MTB (also known as E-boat later in the war)
Studie Nord	Initial draft of plans for the invasion of Norway
Wehrmacht	German armed forces
Weserübung Nord	The invasion of Norway
Weserübung Süd	The invasion of Denmark
WO	Wachtoffizier Officer of the Watch
Zerstörer	Destroyer. Also used for heavy fighters such as Bf110

Equivalent Naval Ranks

Marine Nationale	*Royal Navy*	*Kriegsmarine*
Matelot	Seaman	Matrose
Matelot breveté	Able Seaman	Matrosen-Gefreiter
Quartier-maître de deuxième classe	Leading Seaman	Matrosen-Obergefreiter
Quartier-maître de première classe	Leading Seaman (4½ years)	Matrosen-Hauptgefreiter
Second-maître	Senior Leading Seaman	Matrosen-Stabsgefreiter
		Matrosen-Stabsoberge-freiter
Maître	Petty Officer	-maat*
Premier maître	Chief Petty Officer	Ober-maat
Maître principal	Boatswain	Bootsmann
	Senior Boatswain	Stabsbootsmann
Major	Chief Boatswain	Oberbootsmann
	Senior Chief Boatswain	Stabsoberbootmann
Aspirant	Midshipman/Cadet	Fähnrich zur See
Enseigne de vaisseau	Sub-Lieutenant	Oberfähnrich zur See
Lieutenant de vaisseau	Lieutenant (Junior)	Leutnant zur See
	Lieutenant (Senior)	Oberleutnant zur See
Capitaine de corvette	Lieutenant Commander	Kapitänleutnant
Capitaine de frégate	Commander	Korvettenkapitän
		Fregattenkapitän
Capitaine de vaisseau	Captain	Kapitän zur See
Contre-amiral	Commodore	Kommodore
Vice-amiral	Rear Admiral	Konteradmiral
Vice-amiral d'escadre	Vice Admiral	Vizeadmiral
Amiral	Admiral	Admiral
		Generaladmiral
	Admiral of the Fleet	Grossadmiral

*A man's trade would prefix the word -maat such as Funkermaat for a Radio Petty Officer or a Bootsmannsmaat for a Deck Petty Officer.

Notes

Chapter 2

1 Admiral David Beatty became First Sea Lord in November 1919 and would hold the post for eight years.

2 Kennedy, *The Rise and Fall of British Naval Mastery*; Macleod (ed.), *Time Unguarded: The Ironside Diaries*; Brown, *Nelson to Vanguard*; Raven and Roberts, *British Battleships of World War II*. In 1939, the Mediterranean Fleet in Alexandria had three battleships, one carrier and six cruisers in two squadrons in addition to four destroyers and one submarine flotilla.

3 *Renown* had completed her upgrade in August 1939 but at 29 knots she was still slower than *Scharnhorst* and *Gneisenau*; see Haarr, *The German Invasion of Norway*.

4 In 1924: *Berwick, Cornwall, Cumberland, Kent* and *Suffolk*. In 1925: *Devonshire, Sussex, Shropshire* and *London*. In 1926: *Dorsetshire* and *Norfolk*.

5 *Leander, Achilles, Ajax, Neptune* and *Orion*.

6 *Arethusa, Penelope* and *Aurora*.

7 *Birmingham, Glasgow, Newcastle, Sheffield, Southampton, Liverpool, Gloucester* and *Manchester*.

8 NA-ADM 116/4182. Well over twenty further cruisers were under construction or fitting out.

9 The I-class introduced quintuple mounts in 1936 after trials in individual ships of the earlier classes.

10 During the first winter of WWII, the Tribals were kept extensively at sea and many developed leaks and faults in the electrical systems. At one time, twelve out of sixteen ships were out of action.

11 There were objections from the Naval Staff to the use of QF Mk XII guns in fleet destroyers, and they were tested for some time in *Hereward* before being accepted.

12 The N-class ships started commissioning in late 1940, largely in the Australian, Dutch and Polish navies.

13 Grove, *The Defeat of the Enemy Attack on Shipping*. The first of the purpose-built true minesweepers of the *Bangor*-class was laid down in September 1939 and commissioned a year later.

14 Grove, *The Defeat of the Enemy Attack on Shipping*.

15 Beatty retired as First Sea Lord in 1927. He died in March 1936.

16 Barnett, *Engage the Enemy More Closely*.

17 NA-ADM 205/1. The minutes of the meeting also document the British dilemma of having to prepare for conflict in many theatres around the empire, Far East and Mediterranean in particular. The 200-plus ships under construction included five *King* George-class battleships, six *Illustrious-class* carriers and over twenty cruisers.

18 The French sailors were a mix of volunteers and enlisted men, drawn on a rotational basis from the merchant and fishing fleets. A sailor usually served a full year in the navy every five years. Almost three-quarters of them came from Brittany, the rest largely from the Mediterranean coastal districts.

19 Hood, *Royal Republicans*.

20 Auphan and Mordal, *The French Navy in World War II*; Hood, *Royal Republicans*. Neither the Admiralty nor the War Cabinet seemed to realise they had a challenge with the French naval command, not even when Admiral Darlan created an 'awful scrap' when offered a lesser decoration than Gamelin (see Dilks (ed.), *The Diaries of Sir Alexander Cadogan*).

21 NA-FO 371/21571. Chaired by the prime minister, the CID was the Cabinet's prime advisory forum for strategic policy. Its members varied but usually included the Chancellor of the Exchequer, the Foreign Secretary, relevant ministers and the three service Chiefs of Staff. In 1939, the CID was chaired by General Hastings Ismay.

22 This position was initially held by Thomas Inskip, who was succeeded in 1939 by Admiral Chatfield.

23 Barnett, *Engage the Enemy More Closely*; Kennedy, *The Rise and Fall of British Naval Mastery*; DiGiulian, 'The British High Angle Control System'.

24 Brown and Meehan, *Scapa Flow*.

25 Levy, 'Ready or Not? The Home Fleet at the Outset of World War II'.

26 Barnett, *Engage the Enemy More Closely*. Having joined the navy as a cadet in 1894 at the age of fourteen, Forbes became a gunnery specialist and served on the staff of Jellicoe at Jutland. He earned the DSO for his services on board *Iron Duke* and was given command of the light cruiser *Galatea* in July 1917. In WWI, Forbes served both as Third Sea Lord and as second in command of the Mediterranean Fleet.

27 Pound joined the Royal Navy as a cadet in 1891, thirteen years old, and was posted on his first ship, *Royal Sovereign*, in 1893. Always excelling at examinations as well as daily work, he advanced fast. In 1909, Pound was promoted commander and appointed to the Admiralty, commencing a cycle of seagoing and Admiralty positions. In May 1916, at the Battle of Jutland, he was captain of the battleship *Colossus*.

28 Brodhurst, *Churchill's Anchor*; Barnett, *Engage the Enemy More Closely*; Roskill, *The War at Sea*, vol. 1

29 Roskill, *The War at Sea*, vol. 1

30 AIR 8/226; AIR 2/22608; Goulter, *A Forgotten Offensive*. Bomber Command usually had 50–60 per cent of the allocated number of aircraft in pre-war expansion schemes; maritime aircraft never exceeded 10–12 per cent.

31 In September 1939, the FAA had 232 front-line aircraft, over half of which were Swordfish. The basic unit of the FAA was a flight of six aircraft; a squadron usually had two flights.

32 *Hermes* would serve mainly in the east, where she was sunk in 1942 by Japanese carrier-borne aircraft. *Eagle* served mainly in the Mediterranean and the east. She was sunk by *U73* en route to Malta in 1942.

33 Brown, *Nelson to Vanguard*.

34 Arrester cables and catapults had been tested in the 1920s, but the aircraft at the time were not sturdy enough to sustain their use. *Courageous* and *Glorious* had arrester wires, but no catapults.

35 The armour of the belt was 110 mm (4.5 inches). Over the boiler rooms and magazines it was 89 mm (3.5 inches).

36 The Blackburn Roc fighter developed in parallel with the Skua was for all practical purposes useless.

37 *Argus* was used for aircraft transport from mid-1940 and briefly taken into operational service in 1942.

38 NA-ADM 199/2063. At 12:09 on 1 September, a signal from the Admiralty indicated that a sizeable German fleet was off Iceland with similar orders. Forbes headed west, but nothing was found.

Chapter 3

1 The battleships *Hessen, Hannover, Elsass, Braunschweig, Lothringen, Preussen, Schlesien* and *Schleswig-Holstein* had a top speed of less than 18 knots and were no match for any North Sea counterparts – as was intended. Six of the ships could be on active service at any time. *Schlesien* and *Schleswig-Holstein* would undergo upgrades and refits and have long careers, including active service in WWII. The cruisers had a very limited service life; some were used as floating batteries or living quarters during WWII.

2 Still, the number of employees at the yards was reduced from 90,000 in 1922 to less than 10,000 in 1932.

3 Raeder had been naval representative to the Armistice Commission and later served in the staff of Admiral von Throta, the last C-in-C of the Imperial Navy. There were allegations that he had been involved in coup plans and he had been placed in an anonymous job at the Naval Archives while he was investigated. By the time Behncke called him back, Raeder had been cleared of the charges.

4 A metric ton is 1,000 kilograms whereas a long ton is 1,016 kilograms. Standard displacement meant fully manned and equipped for sea, including armament, ammunition, equipment and provisions as intended to be carried in war, but without fuel or reserve boiler feed water on board. The latter was excluded as it would have punished British ships, which were designed for long periods at sea.

5 *Möwe, Seeadler, Greif, Albatros, Falke* and *Kondor*.

6 *Wolf, Iltis, Jaguar, Leopard, Luchs* and *Tiger*.

7 Ingenieurkantoor voor Scheepsbouw – IvS or InKaVos – led by Hans Teichel, a former head of construction at the Germania yard in Kiel. Secret funding from the Reichsmarine also found its way to Holland.

8 Officially, no air force existed at the time

9 Raeder, *Mein Leben*, vol. 2; Nolte, *Mit Anstand zu sterben verstehen*; Gray, *Hitler's Battleships*.

10 Reichsmarine – Navy of State; Kriegsmarine – Navy of War.

11 The Ministry of Aviation (Reichsluftfahrtministerium – RLM) was established during 1933, responsible for the development of aircraft as well as the organisation and equipment of the air force units. Reichsmarschall Hermann Göring was minister of aviation as well as C-in-C of the Luftwaffe.

12 The figure of 35 per cent appears to be an arbitrary adaptation of 'one-third of the British Navy' and 'similar to the French Navy'.

13 Joachim von Ribbentrop was at this time special adviser to Hitler. In February 1938, he was appointed minister of foreign affairs. Raeder does not speak highly of Ribbentrop or his skills in his memoirs.

14 NA-ADM 178/137. The agreement allowed for three of the battleships to be as large as 35,000 tons.

15 Earlier in the day, Hitler had also been informed by his doctor that a long-lasting inflammation of his vocal chords was benign and did not require an operation. Raeder, *Mein Leben*, vol. 2.

16 NA-ADM 178/137; Raeder, *Mein Leben*, vol. 2; Nolte, *Mit Anstand zu sterben verstehen*. Within weeks of signing the Anglo-German Naval Treaty, the battleship *Bismarck* was authorised as part of the 1935 programme. *Tirpitz* followed a year later.

17 Koop and Schmolke, *Pocket Battleships of the Deutschland Class*; Prager, *Panzerschiff Deutschland, Scwerer Kreutzer Lützow. Deutschland*'s maximum sustainable speed was 25 knots. Up to 28 knots could be achieved but only for a few hours. The term 'pocket battleships' appeared in the non-German press, but strictly speaking, she was a 'pocket battlecruiser'. The French felt severely intimidated by *Deutschland* and laid down the long-deferred battlecruisers *Strasbourg* and *Dunkerque* (26,500 tons and eight 33-cm guns) in 1932.

18 *Gneisenau* displaced 37,902 tons operational, *Scharnhorst* 37,822 tons.

19 The Kriegsmarine classified *Scharnhorst* and *Gneisenau* as battleships, as did *Jane's Fighting Ships*. The Royal Navy consistently referred to them as 'battlecruisers'.

20 Ship-borne radar development had started in Germany in 1933. By 1939, the German radar was arguably better than the British. The *Deutschlands* also carried radar, but these were experimental sets.

21 The second carrier, *Peter Strasser*, was never launched.

22 *Z5* to *Z16* later became known as Type 34A *Zerstörer* translates as 'destroyer', but has a more aggressive denotation in German. In addition to the numbering, *Z1*, *Z2*, etc., the early destroyers were named after prominent German naval personnel, largely from WWI. Konteradmiral Leberecht Maass, for example, died when the cruisers *Cöln, Mainz* and *Ariadne* were intercepted by superior British forces on 28 August 1914.

23 See Appendix E.

24 At Narvik this was to become a serious issue when the supply ships did not show up as planned and at least five of the ten *Zerstörer* lost were beached or abandoned, out of ammunition.

25 RM 7/91; Harnack, *Zerstörer unter Deutscher Flagge 1934 bis 1945;* Elfrath, *Deutsche Zerstörer 1934–45*.

26 S for *schnell* or 'fast'.

27 For a detailed account of the S-boats in Scandinavian waters in April and May 1940, see Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.

28 The Voith-Schneider system consisted of two six-bladed sets of vertical 'knives' rotating from a 2.5-metre disc below the stern of the boats. This gave unparalleled manoeuvrability for the small R-boats, but the *M-bocks* were close to the upper practical size limit for ships to operate effectively with the system and it was not used other than on *M1* and *M2*.

29 *F9* was sunk by a torpedo from the British submarine *Ursula* in December 1939.

30 Two additional orders were never completed. The nearly complete *Lützow* was sold to Russia in February 1940 and the incomplete *Seydlitz* was rebuilt as a carrier but abandoned in early 1943.

31 KTB SKL; Mallmann Showell, *U-Boat Commanders and Crews, 1939–1945*.

32 The term U-boat is an abbreviation of the German word *Unterseeboot* or 'under-sea boat'. According to Churchill, 'Enemy submarines are to be called U-Boats. The term submarine is to be reserved for Allied under water vessels. U-Boats are those dastardly villains who sink our ships, while submarines are those gallant and noble craft which sink theirs.'

33 Dönitz, *Memoirs*. During WWI, Dönitz served onboard *U39* before taking command of *UC25* and later *UB68*. While attacking an Allied convoy off the coast of Sicily in November 1918 he came under attack by the escort and was forced to scuttle. Returning to Germany in July 1919 after some nine months as a POW, he was accepted back into the navy and served in torpedo boats and destroyers before being appointed captain of *Emden*.

34 The training establishment was moved to Neustadt in May 1937.

35 Kapitänleutnant Otto Weddigen sank the three British cruisers *Aboukir, Cressy* and *Hogue* in an attack in September 1914 before being killed in early 1915 when *U9* was rammed by HMS *Dreadnought*.

36 The target boats were *T23*, *T155, T156* and *T157*. On 20 November 1936, *U18* collided with *T156* in Lübeck Bay. Eight men died, twelve were rescued. *U18* was raised, re-entering service within a year.

37 Dönitz, *Memoirs*. In the mid-1930s, British naval sources had disclosed the invention of the Asdic, declaring that, combined with improved depth-charges, it meant that submarines had become virtually useless.

38 Dönitz earned a series of affectionate nicknames, such as 'Der Löwe' ('The Lion') or Onkel Karl. Communication with the OKW and Hitler went through Raeder, and Dönitz met with Hitler only on a few occasions while he was BdU.

39 KTB FdU; Dönitz, *Memoirs: Ten Years and Twenty Days. Type III* was a minelayer, *Type IV* was a repair and depot boat, *Type V* was a midget submarine while *Type VI* had steam propulsion. These projects were all abandoned.

40 The three bow-tubes were, due to the limited hull diameter, arranged two side-by-side at shoulder-height with the third tube below them on the boat's centreline. There was room for two

spare torpedoes onboard. With mines in two of the tubes, this reduced the total number of torpedoes from five to three.

41 Dönitz's war diaries are full of remarks regarding the limited range of the Type VIIA boats (*U27–U36*), compared to the Type VIIBs and IXs, giving him constant headaches regarding their dispositions.

42 This 88-mm C/35 was a naval gun, developed in parallel with, but not directly related to the similar A/A gun.

43 Of the fourteen torpedoes, five were in the tubes, seven stored internally and two externally. Reloading would take at least half an hour per torpedo, while accessing the two external ones required significant time on the surface during calm conditions, in most cases making their use rather theoretical.

44 www.uboat.net.

45 Prager, *Panzerschiff Deutschland, Schwerer Kreutzer Lützow*. The 9,778 others were of forty-one nationalities.

46 The first German ship carrying contraband, the *Usaramo*, slipped quietly out of Hamburg in August 1936. On board were, among other military equipment, crates containing the first aircraft of the *Condor* Legion.

47 There was controversy in the Kriegsmarine regarding the use of scant resources in Spain, but there is no doubt that the experience gained by both officers and crew would be invaluable later when the war commenced.

48 Paterson, *First U-Boat Flotilla*; Prager, *Panzerschiff Deutschland, Schwerer Kreutzer Lützow*.

49 The aircraft were Russian Tupolev SB2 bombers, most likely flown by Soviet crews. They had orders to avoid confrontation with German ships, but the usual explanation is that the pilots mistook *Deutschland* for the Nationalist cruiser *Canarias*. Another more sinister theory is that the attack was a Republican provocation to start a war between Russia and Germany and/or Italy, from which they would benefit.

50 Some ship's boats were on the water and the exploding shells capsized one of them, damaging another.

51 Williamson, *German Pocket Battleships, 1939–45;* Prager, *Panzerschiff Deutschland, Schwerer Kreutzer Lützow*; www.ibiza-hotels.com; www.scharnhorst-class.dk.

52 *Kreuzerkriegführung* – cruiser warfare – in the German Navy jargon did not only imply the use of cruisers as such, but included the *Panzerschiffe*, auxiliary cruisers, small battlegroups of mixed ships and so on.

53 KTB SKL; Raeder, *Mein Leben*, vol. 2; Nolte, *Mit Anstand zu sterben verstehen*. Going across the Baltic towards Memel in March 1939 on board *Deutschland*, Hitler met bad weather and rumour had it that the Führer was in a poor condition from seasickness and fear. It is an intriguing thought – but not impossible – that Hitler was so upset by this experience that it affected his attitude towards the Kriegsmarine and its C-in-C.

54 Commander-in-Chief Navy and head of Naval War Staff

55 RM 7/194. Boehm and Saalwächter had a less than friendly personal relationship.

56 While Lütjens was acting Flottenchef in 1940, he was succeeded as BdA by Vizeadmiral Hubert Schmundt.

57 FdZ had his headquarters in Wilhelmshaven, while FdT had his in Swinemünde.

Chapter 4

1 Notably, there was also a secret protocol to the pact, according to which northern and eastern Europe were to be divided into German and Soviet spheres of influence. In the north, Finland and the Baltic states were assigned to the Soviet sphere, while Poland was to be partitioned in the event of its 'political rearrangement'.

2 NA-PREM 1/331A; *Documents Concerning German-Polish Relations*; Henderson, *Failure of a Mission*; Schmidt, *Statist auf Diplomatischer Bühne 1923–45*. One unit sent to capture a railway tunnel in the Jablunka Pass of the Carpathian Mountains was not called back and created a minor crisis when it ended up in a skirmish with Polish mountain troops. They managed to pull back, though, and the episode was toned down.

3 *Führer Conferences on Naval Affairs, 1939–1945*.

4 RNM-199/40; NA-PREM 1/133A; *Documents Concerning German-Polish Relations*; Burckhardt, *Meine Danziger Mission 1937–1939;* Lipski, *Diplomat in Berlin, 1933–39;* Henderson, *Failure of a Mission*; Schmidt, *Statist auf Diplomatischer Bühne 1923–45;* Eubank, *Munich*; Peszke, *Poland's Navy, 1918–1945;* Woodman, *The Real Cruel Sea*; Overy, *1939, Countdown to War*; Gates, *End of the Affair*.

5 Today, Danzig is known as Gdansk in Poland. In the 1930s, the Free City of Danzig, officially in existence from 10 January 1920, included over 250 nearby towns, villages and settlements, covering an area of 1,966 square kilometres with a population of some 350,000, 95 per cent of whom were Germans.

6 The League of Nation's Council had set the number of Polish soldiers allowed at Westerplatte to eighty-eight, but during August the garrison was quietly increased to almost 200 officers and men plus around twenty-five to thirty civilians.

7 The light cruiser *Magdeburg* was sunk during operations against Russian ships in late August 1914.

8 High Comissioner Burckhardt later wrote that Kapitän Kleikamp had approached him with a disturbed expression on his face, confiding that he 'had a terrible task ahead, which lay heavily on his conscience'.

9 At the same time, possibly even a few minutes earlier, three Ju87 Stukas of 3./StG 1 led by Oberleutnant Bruno Dilley cut the demolition cables of the railway bridge over the Vistula at Dirschau to prevent its destruction.

10 Skutnik, *Der Zweite Weltkrieg Begann auf Westerplatte*; Burckhardt, *Meine Danziger Mission 1937–1939*. As a sign of respect for their efforts, the German commander, General Eberhardt, let the exhausted Sucharski keep his sword while he was marched towards imprisonment. Polish casualties included fifteen dead and some fifty wounded. Four or five men were apparently also executed for cowardice. Major Sucharski became shell-shocked and his deputy Captain

Dąbrowski had to take command for a while. Sixteen of the German assault group were killed, including Henningsen, and over eighty wounded, four of whom later died.

11 Peszke, *Poland's Navy, 1918–1945*. Polska Marynarka Wojenna (PMW) is the unofficial name frequently used for the Polish Navy instead of the formal Marynarka Wojenna Rzeczypospolitej Polskiej (MWRP). Polish naval ships had the prefix ORP (Okręt Rzeczypospolitej Polskiej – Ship of the Polish Republic).

12 'Peking' is the original spelling of the Chinese capital in pre-war Polish. In modern Polish, 'Pekin' is also used.

13 Peszke, *Poland's Navy, 1918–1945;* http://en.wikipedia.org. Ahead of the destroyers, the training ships *Iskra* and *Wilia* also arrived in Britain with a number of sailors and officer cadets later to man the Polish ships in exile. After a brief upgrade and customisation, *Błyskawica, Grom* and *Burza*, with dual-language liaison officers on board, entered service with the Royal Navy. At first, the destroyers were assigned to the Western Approaches, but the winter storms there were found to be too rough for the top-heavy ships designed for the Baltic and in late October they were reassigned to the 1st Destroyer Flotilla at Harwich.

14 *Zuraw* and *Czapla* had been launched during the summer of 1938. In the morning of 1 September they were hastily commissioned without further ceremonies.

15 Twardowski, 'The Jaskolka Class Minesweepers'. The field was announced through the press, though.

16 Peszke, *Poland's Navy, 1918–1945;* Bachmann, *Der Kampf um Hela*.

17 Peszke, *Poland's Navy, 1918–1945;* http://en.wikipedia.org.

18 Busch, *Unsere Kriegsmarine im Polnischen Feldzug*; Ruge, *Die Minensuchwaffe im Kampf gegen Polen 1939;* Harnack, *Zerstörer unter Deutscher Flagge 1934 bis 1945;* Bachmann, *Die Polnische U-boot Division im September 1939*. Fall Weiss was the codename for the attack on Poland. The *Zerstörer* deployed in the east were *Maass, Beitzen, Thiele, Ihn, Steinbrinck, Eckoldt, Zenker, Heinemann, Arnim* and *Lody. Schultz* had also been assigned, but during refuelling in the morning of the 27th she rammed the torpedo boat *Tiger*, which sank with two dead and six wounded. Sixteen U-boats, mainly Type II, were deployed in the Baltic.

19 4.(St)/TrGr 186 was originally intended for the carrier *Graf Zeppelin*; TrGr being short for Trägergruppe or Carrier Group. Their Ju87C Stukas were equipped with folding wings, a jettisonable undercarriage for emergency landings on water, catapult spools and arrester hooks. Their C-in-C was Hauptmann Blattner.

20 Weal, *Junkers Ju87 Stukageschwader 1937–41;* Bachmann, *Der Kampf um Hela*; Peszke, *Poland's Navy, 1918–1945;* Busch, *Unsere Kriegsmarine im Polnischen Feldzug*; Ruge, *Die Minensuchwaffe im Kampf gegen Polen 1939;* Harnack, *Zerstörer unter Deutscher Flagge 1934 bis 1945;* http://en.wikipedia.org.

21 Gdynia was usually known as Gdingen in German, but after the occupation the city was named Gotenhafen.

22 One man was killed and several wounded by splinters from the Polish shell, which hit one of the casemates.

23 Twardowski, 'The Jaskolka Class Minesweepers'; Busch, *Unsere Kriegsmarine im Polnischen Feldzug*; Ruge, *Die Minensuchwaffe im Kampf gegen Polen 1939;* Bachmann, *Der Kampf um Hela*.

24 In all some fifty-five men were killed on board the various Kriegsmarine ships during the campaign, including *Tiger* and *M85*, while Lieutenant Henningsen and nineteen of his men died at Westerplatte. Around a hundred men were wounded.

25 Bachmann, *Die Polnische U-boot Division im September 1939*. Only on the 5th were orders issued to *Wilk, Żbik* and *Ryś* to lay their mines in the waters around Hela. There was a shortage of mines suitable for the submarines and they only carried some twenty each, half their capacity. It is unclear if the order to lay the mines was withheld by Allied demand or from a perception by the Poles that the Allies might not approve until after the effects of the declaration of war on Germany were seen.

26 Bachmann, *Die Polnische U-boot Division im September 1939;* Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945;* www.polishnavy.pl. *Wilk* went through extensive repairs before she was transferred to the 2nd Submarine Flotilla in late 1939.

27 On the 3rd, Lütjens's *Zerstörer* were sighted from *Orzeł*, but as they were in the sector assigned to *Wilk* Lieutenant Commander Kloczkowski did not attack.

28 NA-ADM 199/1925; Sopocko, *Orzeł's Patrol*. The minesweepers had contact with the submarine through hydrophones and echo-rangers, actually hearing sounds from the boat. During the night, the surface of the water cooled off and the sensitive echo-rangers became useless.

29 Two Estonian guards ended up on board and were set ashore in Sweden with clothing, money and food.

30 RNSM-A1995/303; Sopocko, *Orzeł's Patrol*. On 8 April 1940, *Orzeł* sank the German transport *Rio de Janeiro* off southern Norway. *Rio de Janeiro* was heading for Bergen as part of Operation Weserübung – see Haarr, *The German Invasion of Norway. Orzeł* was lost in the North Sea in May. The position of the wreck has never been ascertained.

31 The crew of *U14* saw and heard the exploding torpedo and reported that it had sunk the submarine it had attacked.

32 Later, the three submarines were moved into Lake Mälaren inside Stockholm. Twenty-nine of the 135 interned men were eventually allowed to transfer to Britain to join the Polish Navy there. The submarines were handed back to Poland in 1945, but over half of the men chose to stay in Sweden or to go elsewhere than Poland.

33 The OKW mistakenly reported two Polish submarines sunk on the 4th, one on the 6th and one on the 8th.

Chapter 5

1 The French ambassador presented a similar ultimatum to the German government at noon, to expire at 17:00. The French declaration of war, which arrived some hours after the deadline, was

met with equal disappointment at the Chancellery. Australia and New Zealand also declared war on Germany on 3 September. South Africa followed on the 4th and Canada on the 10th.

2 *Führer Conferences on Naval Affairs, 1939–1945;* Raeder, *Mein Leben*, vol. 2. In Germany at the time, Great Britain was referred to as '*England*'. The word '*Großbritannien*' existed but was almost never used.

3 RM 7/194; '… *mit Anstand zu sterben verstehen* …' – '… how to die with dignity …'.

4 Harnack, *Zerstörer unter Deutscher Flagge 1939–1945* and *Führer Conferences on Naval Affairs, 1939–1945*.

5 *Führer Conferences on Naval Affairs, 1939–1945*

6 *Führer Conferences on Naval Affairs, 1939–1945*. The phrase 'blockade of England' (*Belagerung von England*) was used by Raeder for the first time in this meeting.

7 The Luftwaffe held that it would not be capable of any large-scale attacks on Britain until the beginning of 1940.

8 RM 7/194, underlining is in the original.

9 KTB SKL; *Führer Conferences on Naval Affairs, 1939–1945*. Due to an unresolved difference in opinion between U-boat Command and senior officers of the OKM about what kind of submarines should be built and how to deploy them, Raeder had decided to focus the resources to the surface fleet in 1937 and 1938.

10 IWM-90/24/1; RNSM-A1988/032. The signal was intercepted by the German B-Dienst.

11 IWM-65/19/1.

12 Also on this day, General Edmund Ironside was appointed Chief of the Imperial General Staff.

13 NA-ADM 167/110.

14 NA-ADM 205/5; Churchill, *The Second World War*, vol. 1; Lambert, unpublished.

15 In addition to Chamberlain, Halifax and Churchill, the Cabinet consisted of Lord Privy Seal Samuel Hoare, Chancellor of the Exchequer John Simon, Secretary of State for War Leslie Hore-Belisha, Secretary of State for Air Kingsley Wood, Minister for the Coordination of Defence Admiral Chatfield and Minister without Portfolio Lord Hankey. Edward Bridges was the permanent secretary of the War Cabinet, while Rupert Howarth was deputy secretary for the Civil Committee and Major General Ismay the deputy secretary for the Military Committee.

16 NA-PREM 1/331A; Butler, *Grand Strategy*, vol. 2; Macleod (ed.), *Time Unguarded: The Ironside Diaries*; Dilks (ed.), *The Diaries of Sir Alexander Cadogan; The Memoirs of General the Lord Ismay*.

17 NA-ADM 199/2063. The battleships were *Nelson, Rodney, Royal Oak, Royal Sovereign* and *Ramillies*, the battlecruisers *Hood* and *Repulse* and the carrier *Ark Royal*. The cruisers at Scapa Flow were *Aurora, Sheffield, Edinburgh* and *Belfast*, while *Southampton* and *Glasgow* were at the Humber. *Renown* joined the Home Fleet on 4 September, while *Royal Sovereign* left for a refit on the 23rd. The cruisers *Norfolk, Newcastle* and *Suffolk* all joined in September.

18 NA-ADM 199/376. The 8th Destroyer Flotilla was refitting and not in service during most of the first four months of the war. The repair ship *Greenwich* was at Scapa Flow and could do basic repairs and maintenance, but there was a general lack of spares, creating delays. *Woolwich* moved to Scapa Flow in March 1940.

19 The reason for this diversion was rumours that Germany was planning a seaborne invasion of Holland.

20 NA-ADM 199/2063. The Tribal-class and the K-class destroyers especially suffered this winter.

21 Auphan and Mordal, *The French Navy in World War II*. There were plans to convert *Pluton* to a training ship, renaming her *La Tour d'Auvergne*, but this was not initiated and she kept her name to the end.

22 The large 1,500-ton French submarines were considered suitable for transatlantic convoy escort as defence against German surface raiders.

23 *The Memoirs of General the Lord Ismay*; de Réau, 'Édouard Daladier', in Blatt (ed.), *The French Defeat of 1940*.

24 A number of RN officers had been given 'early retirement' in the late 1920s by the so-called 'Geddes axe', named after Eric Geddes, who chaired the Committee on National Expenditure. Many had remained in the RNR.

25 NA-ADM 199/376; Kennedy, *The Rise and Fall of British Naval Mastery*; Roskill, *The Navy at War, 1939–1945*. The RNVR was colloquially called the 'Wavy Navy', after the 3/8-inch wavy sleeve rings that RNVR officers wore to differentiate them from RN officers with straight rings and RNR officers with braided rings. Quite a number of ex-officers reported voluntarily for service during the summer. Most were told their services were not required and they would be notified if and when they were. The majority of them were eventually called within a few months.

26 Broome, *Convoy is to Scatter*.

27 James, *The Portsmouth Letters*.

28 Whinney, *The U-Boat Peril*.

29 NA-ADM 199/2063; NA-ADM 199/157.

30 Butler, *Grand Strategy*, vol. 2; Dilks, 'Great Britain and Scandinavia in the "Phoney War"'.

31 NA-DM 1/10715.

32 In addition to the signal itself, its origin could be plotted at the OIC, in theory providing the position of the sender through direction-finding (D/F). Stationary transmitters could be isolated from those on board moving vessels, but early in the war the network of D/F stations was limited and recognition and plotting of individual vessels difficult. Hence, the Home Fleet was virtually blind with regard to German ships at sea. Later in the war, the submarine tracking room would become a vital instrument for the Admiralty in countering the German U-boat activity.

33 The War Registry was a civilian-manned entity, receiving and distributing signals to and from the Admiralty.

34 Barnett, *Engage the Enemy More Closely*; Beesley, *Very Special Admiral*.

35 Hinsley, *British Intelligence in the Second World War*; Beesley, *Very Special Intelligence*; Beesley, *Very Special Admiral*. Wilhelmshaven was photographed for the first time in early 1940, Kiel on 7 April.

36 The B-Dienst or Beobachtungsdienst was a cryptanalyst and monitoring service. Most large ships had B-Dienst units on board, which in addition to reading enemy signals were also experts in jamming and fake signals.

37 KTB BdU; Mallmann Showell, *German Naval Code Breakers*.

38 BA-RM 7/84; KTB SKL; KTB BdU; Mallmann Showell, *German Naval Code Breakers*; Hinsley, *British Intelligence in the Second World War*; Beesley, *Very Special Intelligence*.

39 Wilhelm Canaris was born 1 January 1887. He joined the navy in 1905 and served on board *Dresden* during the Battle of the Falklands. He was interned in Chile but escaped and on his return home was awarded the Iron Cross and transferred to intelligence. After WWI, Canaris remained in the navy and was made head of the Abwehr in January 1935. There is little doubt that Canaris actively opposed Hitler and attempted to have him removed on several occasions. In April 1945, Canaris, his Chief of Staff, Generalmajor Oster, and several others were executed for alleged involvement in the attempt on Hitler's life the year before.

Chapter 6

1 The sixty-seven-year-old Lord Cork, also known as 'Ginger' Boyle, had been C-in-C of the Home Fleet in 1933–6. He had retired in June 1939 but, a few months later, Churchill called him back.

2 NA-ADM 205/4; NA-ADM 199/1928; NA-ADM 199/1929; Roskill, *Churchill and the Admirals*; Brodhurst, *Churchill's Anchor*; Lambert, unpublished; Salmon, *Scandinavia and the Great Powers*.

3 In February 1940, Generaladmiral Saalwächter fell sick and went to convalesce for six weeks. Admiral Carls was transferred to Group West to replace him temporarily. Admiral Guse deputised as C-in-C Group East.

4 Bachmann, *Die Deutsche Seekriegführung in der Ostsee*; Bech, *Søkrig i Danske Farvande*; Kutzleben, Schröder and Brennecke, *Minenschiffe 1939–1945;* Kurowski, *MS Hansestadt Danzig*.

5 By 31 August, the Coastal Fleet, Kustflottan, consisted of the cruisers *Gustav V, Drottning Victoria* and *Gotland*, the destroyers *Malmö, Stockholm, Ehrenskjöld, Klas Uggla* and *Klas Horn*, seven submarines and a number of depot ships and auxiliaries. In addition, the cruiser *Manligheten*, two destroyers, three submarines and a number of minesweepers were stationed in Gothenburg. Further cruisers and destroyers were deployed in the eastern Baltic, near Gotland and Åland, but these were older ships of limited offensive value.

6 *Flottans Neutralitetsvakt 1939–1945;* Bachmann, *Die Deutsche Seekriegführung in der Ostsee*. Many merchant ships would have to reduce their cargo or off load part of it to the railway for overland transit in order to pass the 5-metre threshold at Falsterbo. A channel through the Falsterbo Peninsula was opened in 1941.

7 These were cable mines controlled from land.

8 Bech, *Søkrig i Danske Farvande*. The field was laid shortly after the occupation of Denmark in April 1940.

9 Most of the neutral ships in the Baltic were Finnish, Danish, Swedish or Estonian, but Greek and Dutch ships were also encountered.

10 The same instructions as were given to the U-boats and the commerce raiders were issued in the Baltic as well, leaving French vessels free to go as they wished for most of September. On the other hand, all ships bringing goods to any country of the British Empire were to be intercepted.

11 KTB SKL. Both *Hipper* and *Gneisenau* suffered damage in the ice and had to dock for repair. An attempt to hire the Swedish icebreaker *Ymer* was refused on the grounds that she was needed in own waters.

12 Kutzleben, Schröder and Brennecke, *Minenschiffe 1939–1945*; Kurowski, *MS Hansestadt Danzig*; Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945;* Bachmann, *Die Deutsche Seekriegführung in der Ostsee*.

Chapter 7

1 Fritz-Julius Lemp was born in Tsingtao in China to German parents. He joined the navy in 1931 and became Oberleutnant in January 1937. He was briefly in command of *U28* before taking over *U30* in November 1938.

2 *Athenia* and her sister ship *Letitia* had been selected for conversion to armed merchant cruisers once their current passages had been completed. *Letitia* served as an AMC until reconverted to a hospital ship in 1944.

3 Caulfield, *Tomorrow Never Came*. In addition to the passengers, some 900 tons of cargo were on board.

4 NA-ADM 199/2130.

5 Högel, 'Kriegsbeginn'. Broken rudder parts were later retrieved from the tube.

6 Högel, 'Kriegsbeginn'.

7 '*So eine Schweinerei! Warum fährt der aber auch abgeblendet?*' Caulfield, *Tomorrow Never Came*.

8 DUM *U30*-file.

9 KTB FdU.

10 *Southern Cross* was the private yacht of Axel Wenner-Gren, a Swedish multi-millionaire, heading for South America with his American-born wife to escape the war. *City of Flint* was a 3,000-ton US freighter. She carried twenty-nine American passengers wishing to leave Europe. *Athenia* left Glasgow thirty-six hours before *City of Flint* but as she held at Belfast and Liverpool she was only some ten hours ahead as she entered the Atlantic.

11 The lifeboats hung in two levels, with No. 5A lifeboat below No. 5. The upper boats, which were lowered first, could take fifty-six passengers, the lower eighty-six. There were two motor boats.

12 NA-ADM 199/2130; Caulfield, *Tomorrow Never Came*.

13 Chief officer Copland and some other officers had transferred to other lifeboats in need of experienced sailors to take command.

14 Caulfield, *Tomorrow Never Came*.

15 *Electra* and *Escort* were short of fuel and on their way to Scapa Flow. Due to the shortage, they could not proceed at more than 25 knots.

16 The woman never regained consciousness and later died at Greenock hospital.

17 NA-ADM 199/2130; Caulfield, *Tomorrow Never Came*.
18 Gainard, *Yankee Skipper*.
19 KTB FdU.
20 BA-RM 7/84; KTB FdU. Dönitz found this ‘of limited use’ as there was no definition of ‘passenger liner’.
21 Högel, ‘Kriegsbeginn’.
22 Fritz-Julius Lemp was killed when his new command *U110* was sunk by British destroyers on 8 May 1941. The boat was forced to the surface and, while submariners were being rescued, sailors from *Bulldog* managed to get on board *U110*, retrieving, among other valuables, its Enigma coding machine. Lemp did not survive.

Chapter 8

1 Asdic is allegedly an acronym for the Anti-Submarine Detection Investigation Committee fostering it, but it is unclear if such a committee ever existed.
2 Grove, *The Defeat of the Enemy Attack on Shipping*. In the Admiralty, a special officer for A/S warfare did not exist between 1921 and 2 September 1939. During that period a single officer with a handful of civilian clerks attached to the Tactical Division considered the issue as part of the defence of trade along with mine-sweeping and mercantile movements.
3 NA-ADM 1/17659. In the first months of the war, even cruisers were used for U-boat hunting, but this was quickly stopped.
4 Clayton, *Sea Wolves*.
5 NA-ADM 1/17659; NA-ADM 1/9501; Grove, *The Defeat of the Enemy Attack on Shipping*; Churchill, *The Second World War*, vol 1. Later in the war, improved Asdic as well as weapon systems such as the Hedgehog, throwing A/S bombs forwards while still in Asdic contact, would give the A/S vessels the firm upper hand, but never ‘eliminate’ the U-boat menace completely.
6 IWM-65/19/1.
7 NA-ADM 199/124.
8 Minol was developed by the Admiralty to augment the supplies of TNT and other explosives in short supply at the outbreak of the war. The aluminium component in Minol prolongs the explosive pulse, making it very suitable for use in underwater weapons such as mines and depth-charges.
9 A month after the outbreak of war, forty-two Bangor-class fast sweepers and fifty-two Admiralty trawlers were under construction, but these vessels would not become operational until well into 1940.
10 Kerslake, *Coxswain in the Northern Convoys. Northern Gem* and her sisters had been built in Germany in 1935 as reparation of debt. They were fine ships, larger than the ordinary British fishing vessels.
11 As the war dragged on, some of the skippers were promoted to skipper lieutenant.
12 The name Sparrow’s Nest (referring to a previous owner rather than the bird), was used generally for the RNPS HQ in Lowestoft. Later, it became the administrative HQ for more than

70,000 men and 6,000 ships, including trawlers, whalers, drifters and motor launches.

13 NA-ADM 167/110.

14 Colin Warwick had a commission as a midshipman RNR after leaving the Nautical College in Pangbourne and three years apprenticeship in the Royal Mail Steam Packet Company.

15 Warwick, *Really Not Required*.

16 Lieutenant Warwick would later take command of *St Loman* when Cambridge transferred to MTBs.

17 Warwick, *Really Not Required*. Lieutenant Richard Stannard of *Arab* would be awarded one of the first Victoria Crosses of the navy in WWII for outstanding feats at Namsos in Norway; see Haarr, *The Battle for Norway*.

Chapter 9

1 British merchant shipping remained private and, early in the war, the Admiralty had no control over cargo or routing of ships not chartered or purchased by the Ministry of Shipping. The Naval Control Service officers or NCSOs, usually retired captains or commanders, were installed in key ports around Britain as well as abroad. They could not, unless the ship was requisitioned, influence where it sailed or its load, but did decide if the ship should sail in a convoy or, due to its lack of speed, sail independently. In foreign ports, the NCSOs were largely in place by 30 August, attached to the consular offices. Naturally, these became key sources of intelligence.

2 Barnett, *Engage the Enemy More Closely*. The British historian Correlli Barnett holds up the Admiralty's failure to prepare the Royal Navy for convoy defence and to instruct it how to fight submarines as its most serious failure of judgement between the wars, closely followed by its inability to assess properly the dangers from the air and the need for advanced A/A guns and fire-control systems.

3 NA-ADM 199/1; NA-ADM 199/2; NA-ADM 199/7; Warwick, *Really Not Required*; Grove, *The Defeat of the Enemy Attack on Shipping*. At first, Atlantic convoys were also sailing from Kingston. By the end of 1939 this was abandoned and all convoys left from Halifax. This made the number of ships unmanageable for the Canadian port and, in March 1940, it was decided to gather ships coming from Panama or the Caribbean at Bermuda and let them rendezvous with the Halifax part of the convoys off Newfoundland.

4 Broome, *Convoy is to Scatter*.

5 NA-ADM 199/1. Most convoys had a vice commodore to take over should the commodore's ship be sunk.

6 Creighton, *Convoy Commodore*. Rear Admiral Creighton had been at Jutland on board *Queen Elizabeth*. Later, he commanded *Royal Sovereign* in the Mediterranean, before retiring in 1934.

7 The shortage of A/A guns meant that most merchant ships had only machine guns for defence against aircraft.

8 Hewitt, *Coastal Convoys*; Roskill, *The War at Sea*, vol. 1, and Churchill, *The Second World War*, vol 1.

9 IWM 75/105/1.

10 All danger area warning signals were prefixed by the letters QZ, giving them priority, hence 'Q-signals'.

11 Grove, *The Defeat of the Enemy Attack on Shipping*.

12 Once inside the Leads, the convoy routinely dispersed, ships heading individually for their ports of destination. In British waters, ships would join or depart the convoys off Kirkwall or Shetland for the west coast. Ships released from the contraband control base at Kirkwall were allowed to join the outbound convoys, while traffic between Firth of Forth and Scapa Flow and Kirkwall tagged on in both directions if convenient.

13 This necessitated the adding of destroyers from the Humber Force as well as the 18th Cruiser Sqadron to the escort.

14 The last convoy leaving Bergen was numbered HN-25, but before this, a couple of the previous convoys were so large they were split into As and Bs, leaving on separate days with individual escorts.

15 NA-ADM 199/2110. The Norwegian coast was divided into three sea defence districts by the RNN. SDD1 covered from Oslo to Stavanger with HQ in Horten, SDD2 from Stavanger to north of Trondheim with HQ in Bergen and SDD3 in the north with HQ in Tromsø.

16 NA-ADM 199/1; NA-ADM 199/2110; NA-MT 59/799. It was feared that German surface forces might attack the Scandinavian convoys and the originally designated V&W destroyers were replaced by Home Fleet destroyers. The submarine attached to the close escort was extra protection against German cruisers and destroyers that might slip past the Home Fleet cruisers.

17 NA-ADM 53/108565. Convoy ON-3 had seven ships, all British, three of them ore ships for Narvik. Convoy HN-3 had fourteen British, one Finnish and two Estonian vessels. *Eskdene* was torpedoed by *U56* on 2 December off Tyne. The entire crew was picked up by the Norwegian freighter *Hild* and the wreck, loaded with timber, stayed afloat, eventually grounding on Head Sands. *Eskdene* was later refloated and returned to service.

18 Gritten, *Full Circle*.

19 *Coventry, Curlew, Curacoa, Carlisle, Cairo* and *Calcutta* had been converted to A/A cruisers by the outbreak of war or shortly after. The A/A guns were WWI vintage and when used in earnest the barrels quickly became so worn that the accuracy of the fire was less than good, the shells sometimes exploding as they left the guns. *Curlew*, lost in Norway in 1940, was among the first RN ships to be equipped with radar.

20 NA-ADM 199/2.

21 Four casualties are associated with the Scandinavian convoys. *Eskdene* was torpedoed by *U56* while she was a straggler from HN-3, but did not sink and was towed to the Tyne. *Svinta* hit a mine while under tow, having been damaged by aircraft when in convoy ON-21. *Svartön* was torpedoed and sunk by *U58* while a straggler from HN-6. *Signe* was sunk by a torpedo from *U38* while a straggler from HN-23A.

22 Kretschmer, as part of the screen for Operation Nordmark, had been made aware of the convoy through a signal from the BdU the day before and during the night he had been guided towards it by a signal from *U19*.

23 KTB *U23*. The submarine was *Thistle* and no L-class boat.

24 NA-ADM 1/10667. This part of the A/S supplement of the convoy instructions was amended shortly after.
25 NA-ADM 1/10667.
26 *The War Illustrated*, vol. 2, .
27 RNSM A 1995/75. The officer of the watch on board *Ilex* believed the explosions were from depth-charges and informed Lieutenant Commander Saumarez accordingly. As nothing else happened, he saw 'no reason for concern' until the signal from *Thistle* was finally seen fifteen minutes later. Saumarez was later criticised by C-in-C Home Fleet and C-in-C Rosyth for not lowering his boats before proceeding to search for the U-boat.
28 RNSM A 1995/75.
29 NA-ADM 1/10667; RNSM A 1995/75; *The War Illustrated*, vol. 2, .
30 KTB *U23*.
31 Among the casualties were three passengers and six survivors from *Liana*, which had been sunk by *U14* two weeks earlier.
32 There is some uncertainty as to the actual number of merchant ships in HN-14. More than half of the thirty-seven ships originally leaving Bergen could not find the escort due to fog and turned back.
33 NA-AIR 15/16. To the annoyance of Commander Graham of *Escapade* and his crew, they were not given a share in the sinking of *U63*, in spite of having attacked first. *Narwhal*, on the other hand, was credited, having sighted her first.

Chapter 10

1 Admiral Horton repeatedly expressed the view: 'In submarines there is no margin for error, you are either alive or dead.'
2 In a note to his commanding officer Admiral Boehm on 28 August, Dönitz held that he would not be able to meet the demands on his service and urged an immediate acceleration in the building of U-boats. The message was submitted to Raeder and the SKL on 4 September and to Admiral Schniewind and others on the 5th.
3 At the outbreak of war, *U26, U27, U28, U29, U30, U33, U34, U37, U38, U39, U40, U41, U45, U46, U47, U48, U52* and *U53* were in the Atlantic while *U31, U32* and *U35* were on their way.
4 BA-RM 7/891; BA-RM 7/84; KTB FdU; NA-ADM 186/802; *Führer Conferences on Naval Affairs, 1939–1945;* Hessler, *The U-Boat War in the Atlantic, 1939–1945;* Unger, unpublished account (U56).
5 KTB FdU; BA-RM 87/1; NA-ADM 186/802. On 18 August, Korvettenkapitän Ibbeken was appointed FdU West and Fregattenkapitän Oskar Schomburg FdU Ost, both reporting to Dönitz. Other key members of his staff at the outbreak of war included Kapitänleutnant Victor Oehrn (A3), Korvettenkapitän Hans-Günther Loof and Kapitänleutnant Hans-Gerrit von Stockhausen (A2). For personnel and administration, the U-boat arm remained subordinated to the Flottenchef until 1942.

6 The London Protocol was set up to make part of the unratified 1930 Naval Treaty into a focused submarine agreement. By the outbreak of WWII, thirty-six countries had signed the protocol.
7 U-boats did not carry anything but small inflatables and as no commanding officer would leave his boat or send an officer, the master or first officer of the intercepted vessel would have to come across to the submarine.
8 KTB BdU. It was shortly after approved that French ships in convoys north of Brest could be attacked.
9 KTB BdU.
10 KTB *U33*; RNSM-A1981/022; NA-ADM 199/2130.
11 'Weisung Nr. 5 des Oberbefehlshaber der Wehrmacht' – 'Order No. 5 from the Supreme Commander'.
12 KTB SKL; KTB BdU; *Führer Conferences on Naval Affairs, 1939–1945;* Dönitz, *Memoirs*.
13 Grove, *The Defeat of the Enemy Attack on Shipping*.
14 KTB *U3;* KTB *U4*.
15 Hessler, *The U-Boat War in the Atlantic, 1939–1945*.
16 NA-ADM 199/2130. Numbers vary between sources, but the order of magnitude is similar.
17 KTB BdU. *U26* was to be the only German U-boat to pass the Strait of Gibraltar in both directions. None of the boats subsequently entering the Mediterranean ever returned to the Atlantic.
18 The freighters *Goodwood* and *Orsa* went down from the mines laid by *U15* off Flamborough Head on 10 September and 21 October, respectively. Also on 10 September, the British steamer *Magdapur* ventured into the field laid by *U13* off Orford Ness, sinking within minutes. Later, the liner *City of Paris* was damaged, while the French *Phyrné* sank, having activated the same mines.
19 Dönitz is rather positive about the mine-laying in his memoirs. This appears to be written with some hindsight, though, as he is more hesitant in his KTB BdU.
20 KTB BdU.
21 NA-ADM 1/10084; Grove, *The Defeat of the Enemy Attack on Shipping*.
22 KTB FdU; KTB *U23*; Dönitz, *Memoirs*. This actually happened when *U33* was lost (see Chapter 14).
23 The Type VII boats could take between twenty-two and twenty-six TMA or up to thirty-nine TMB mines. The Type IX boats could take a maximum of forty-four TMA or sixty-six TMB mines, but not all of the Type IXs were fitted for mine-laying.
24 KTB *U34*. Normally, when a torpedo was fired, the tube behind it filled with seawater, compensating for the weight of the torpedo fired. When the tube was prepared for reloading, this water was pumped into the torpedo-cells, maintaining the trim of the boat.
25 Brennecke, *Jäger Gejagte, Deutsche U-boote 1939–1945*.
26 Dönitz, *Memoirs*.
27 To extend the time the boats could stay in the Atlantic, supply bases in neutral Spain were considered, as was placing the supply vessel *Ameland* in a remote bay in Iceland, faking engine problems. KTB FdU.

28 In particular the exhaust valves, which closed against the pressure of the sea, turned out to be a problem. The frames of the MAN engines used in the Atlantic boats were also too weak for the strains of war.

29 KTB BdU.

30 Ausbildungsgruppe-Front or AGRU-Front

31 See also Appendix A.

32 KTB BdU.

33 RM 7/84; KTB SKL; KTB BdU; Dönitz, *Memoirs*; Hessler, *The U-Boat War in the Atlantic, 1939–1945; Führer Conferences on Naval Affairs, 1939–1945*. The estimate for 1940 was later increased to fifty-four.

34 See Appendix F.

35 KTB BdU; *Führer Conferences on Naval Affairs, 1939–1945*.

36 *Versager* translates as 'failure' in English, in the sense of not working properly. During the Norwegian campaign, the issue of torpedo failure reached catastrophic proportions, see Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.

37 KTB *U23*; Robertson, *The Golden Horseshoe*.

38 The batteries of the G7e torpedoes needed to be preheated to 30 ºC to operate with maximum speed and range, which was rarely possible during an attack. It was not until the release of the modified G7e/T3 in 1942 that the Kriegsmarine had a reliable electric torpedo. Electric torpedoes were not available to the RN until August 1944.

39 In Britain, the Directorate of Torpedoes and Mining (Investigations) – DTMI – suspected that a magnetic torpedo was being used, but it was not until one was recovered at Narvik that the details of the weapon system became known.

40 Unger, unpublished account (*U56*); KTB BdU; Dönitz, *Memoirs*. The third torpedo exploded at the end of its run.

41 KTB BdU; KTB *U25*. The G7a torpedoes could not be set to run shallower than 3 metres as there was a serious risk that the torpedo would run to surface and its motor malfunction.

42 KTB SKL; KTB BdU. The TVA was the establishment for torpedo experiments; the TEK was a parallel establishment for testing new torpedo types.

43 Dönitz, *Memoirs*; Alman, *U48*. In 1941 Wehr was court-martialled and sentenced to six months' detention, after which he was retired. Three other officers were also court-martialled.

44 KTB BdU.

45 In January 1942, the crew of *U94* tested their torpedoes in mid-Atlantic. They discovered a leak, leading to excess pressure build-up in the torpedoes' balance chambers, where the valve controlling the depth at which the torpedo ran was located. The mystery of the deep-running torpedoes had finally been solved.

46 NA-ADM 116/164; NA-ADM 234/380; RNSM-A1993/117-002; Clayton, *Sea Wolves*.

47 The Mk XVI mines were tailormade for the submarines and had an explosive charge of 350 pounds.

48 *Porpoise* was in reality a P-class boat while the others were redesigns of similar size with internal fuel tanks.

49 The boats of Group 1 were fitted with a ‘disappearing gun’, which was lowered into a forward extension of the base of the conning tower upon diving. It was a fine idea on paper, but raising the gun while the boat was surfacing caused instability and the idea was abandoned, all S-class boats being equipped with a fixed deck-mounted 3-inch gun.

50 The T-boats got off to an ominous start when *Thetis* sank on her acceptance trials in Liverpool Bay in June 1939. Of the 103 men aboard, many of whom were personnel from the builders, Admiralty officials and new commanders, only four survived. *Thetis* was salvaged and recommissioned as *Thunderbolt* in 1940.

51 During the war, several U-class boats went significantly deeper than this – and surfaced to tell the tale.

52 RNMS-A1993/117. Three of the thirteen WWI boats were L-class and ten H-class.

53 These were *Sunfish, Thistle, Triad, Trident, Taku*, *Tarpon, Tribune* and *Truant*.

54 NA-ADM 234/380; RNSM-A1993/117; Hezlet, *British and Allied Submarine Operations in World War II*; Poolman, *Allied Submarines of World War Two*. A supplementary signal adding that German merchant ships should be sent to Kirkwall with a prize crew or the crew taken on board the submarine was simply ignored.

55 Hessler, *The U-Boat War in the Atlantic, 1939–1945;* Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.

Chapter 11

1 NA-ADM 199/124. The final compromise of this discussion was the escort groups established in early 1941. The escort groups were attached to the convoys but operated independently, aiming to sink U-boats as they appeared.

2 NA-ADM 205/2.

3 Churchill, *The Second World War*, vol. 1.

4 Captain Frederic Walker, later to become a superb anti-U-boat expert, learned this the hard way. After finishing at the anti-submarine school in 1925, he was posted to capital ships for six years, without promotion. When he was finally made commander and given a destroyer, Walker promoted its capacities as a submarine hunter. This resulted in a swift transfer to the yacht of the C-in-C of the China Station. It would take the outbreak of war before Walker finally got his chance and was proved right.

5 The controversial memorandum was reissued with amendments in December 1938 and September 1939.

6 NA-ADM 1/10084; NA-ADM 199/124; NA-ADM 1/12141.

7 http://freespace.virgin.net/john.dell. The Cooper bomb was a WWI design, basically harmless to a U-boat.

8 NA-ADM 199/2130.

9 The Cooper bombs were set to explode on impact. The A/S bomb had a fuse that was supposed to go off immediately if the bomb struck a hard surface, such as a U-boat, or have a few seconds’ delay if it struck water.

10 NA-ADM 199/2130; Högel, 'Kein Tag vie jeder andere'; http://freespace.virgin.net/john.dell.

11 RM 7/84; Högel, 'Kein Tag vie jeder andere'; http://freespace.virgin.net/john.dell. Maschinenober-gefreiter Adolf Schmidt had been wounded in the arm by shrapnel from one of the Skua bombs and had an artery cut. He recovered on board *Hamm*, but was taken POW when Britain occupied Iceland in May 1940 and sent to Canada.

12 http://avalon.law.yale.edu.

13 http://freespace.virgin.net/john.dell.

14 NA-ADM 199/124.

15 *Courageous* was made a training carrier when *Ark Royal* joined the Home Fleet in December 1938. In May 1939, *Furious* became a training carrier when *Courageous* was put in the reserve.

16 NA-ADM 156/195; Lamb, *War in a Stringbag*. On 10 September, while heading back to Plymouth, a Swordfish of 822 Squadron was lost as Pilot Lieutenant Playfair, observer Sub-Lieutenant Wheatman and TAG Corporal Frizell failed to find the carrier returning from patrol, due to low cloud.

17 IWM-65/19/1 and NA-ADM 199/157.

18 The latter was an awkward A/S group as neither of the cruisers had Asdic and relied on guidance from *Kelly*.

19 NA-ADM 199/157. Talbot later became commander of the carriers *Furious, Illustrious* and *Formidable*.

20 Mack, *HMS Intrepid: A Memoir*.

21 NA-ADM 199/2130. Six men drowned trying to lower a boat on their own initiative while *Kafiristan* was under way. Master Busby and the twenty-eight survivors were picked up by *American Farmer* and landed in the USA.

22 Captain Makeig-Jones believed his crew to be too inexperienced to handle many aircraft in the air at one time.

23 The radio carried by the Swordfish at the time was rudimentary. They could communicate with the carrier by Morse code, but not between aircraft.

24 NA-ADM 199/157; Lamb, *War in a Stringbag*.

25 Curiously, four escorting destroyers are reported in the KTB of *U29*, one destroyer ahead, one astern and one on each side. At 18:00, when this was recorded, *Inglefield* and *Intrepid* had been dispatched over two hours earlier to search for *Kafiristan* and only *Ivanhoe* and *Impulsive* were left in the screen.

26 KTB *U29*, in Morgan and Taylor, *U-Boat Attack Logs*.

27 KTB *U29*, in Morgan and Taylor, *U-Boat Attack Logs*.

28 KTB *U29*, in Morgan and Taylor, *U-Boat Attack Logs*. Otto Schuhart was awarded the Iron Cross First Class and the entire crew the Iron Cross Second Class. Schuhart was eventually awarded his Knight's Cross in May 1940. He survived the war, serving in the West German Navy until 1967, and died in 1990.

29 NA-ADM 199/157.

30 NA-ADM 156/195.

31 The ring main was only split into sections during action stations.

32 Repeated efforts to shut down the siren seem to have failed, partly from an inability to reach the fuse boxes.
33 NA-ADM 199/157.
34 NA-ADM 156/195; NA-ADM 199/157.
35 Lamb, *War in a Stringbag*.
36 R Carson, unpublished account.
37 Commander Abel-Smith was responsible for the Fleet Air Arm Department of *Courageous*.
38 NA-ADM 199/157. *Dido* had spent more than six hours rescuing sailors and airmen, and in recognition of her gallant effort *Intrepid* was detailed to escort her to Liverpool.
39 NA-ADM 199/157; NA-ADM 1565/195. Churchill asked the Admiralty for an assessment of whether anybody should be made responsible for the sinking. The Admiralty felt that it would not be right to bring any of the survivors before a court martial but suggested that the executive officer, Commander Claude Woodhouse, who was responsible for the drill and exercises of the crew, should be informed that he 'had incurred Their Lordships' displeasure'. This, however, was rejected by Churchill as Woodhouse had suffered spinal injuries and had been invalided out of service. Eventually no measures were taken.
40 NA-ADM 199/2063; NA-ADM 199/124.
41 NA-ADM 199/157.
42 NA-ADM 199/2130. The two pilots, Flight Lieutenants Thurston Smith and John Barrett, were awarded the Distinguished Flying Cross (DFC) for their feat.
43 NA-ADM 199/157.

Chapter 12

1 *Vaddi* (pronounced 'Faddi') means 'Pops' or 'Daddy' in German.
2 Two neutral ships were allowed to proceed unmolested during the 4th.
3 NA-ADM 199/2130.
4 RNSM-A1981/022; NA-ADM 199/2130; KTB *U48*; Thien, *1939 Gegen England*.
5 NA-ADM 199/2130. Master Georgeson and his crew were picked up by the Dutch *Statendam* next morning.
6 KTB *U48*; Suhren and Brustat-Naval, *Ace of Aces*; Churchill. *The Second World War*, vol. 1,; www.uboat.net.
7 These men would have very distinguished careers. During 1941, Suhren and Ites received their own commands. Zürn became fleet engineer and moved ashore. All three received the Knight's Cross and all survived the war. Teddy Suhren would command *U564* with success and become the youngest Fregattenkapitän in the Kriegsmarine. He received the Oak Leaves and Sword to his Knight's Cross. Willy Kronenbitter was commissioned and took command of the Type XXI boat *U3527* in 1945 – too late for any war patrols.
8 During the initial stages of a torpedo attack on the surface, the IWO would be responsible for preparing the torpedoes while the IIWO had control of the boat, positioning it as favourably for the attack as possible. Most captains would prefer to stand back and oversee the initial phase of

the attack, keeping an eye on the escort and where to position the boat to set the trap, while at the final stages they would normally, depending on the relationship between the commander and his IWO, take over to ensure success.

9 Completed in May 1937, *Emile Miguet* was among the biggest tankers afloat at the time.

10 KTB *U48*.

11 NA-ADM 199/2130. *Heronspool* went down later in the morning. Master Batson and his crew were rescued by the American passenger ship *President Harding* and landed in New York some days later.

12 NA-ADM 199/130; KTB *U48*; IWM-65/19/1.

13 KTB *U48;* KTB BdU.

14 NA-ADM 199/2130; KTB *U48*. The burned-out wreck of *Emile Miguet* was eventually sunk by *Imogen* some days later.

15 KTB *U48*.

16 There were not enough Atlantic U-boats at this stage to benefit from grouping the boats and it would be late 1940 before the wolfpack tactics could be applied with any efficiency.

17 KTB *U48;* KTB BdU; Dönitz, *Memoirs*.

18 *Reuter* was en route from Haugesund, Norway in ballast to Curaçao and thus immune.

19 KTB *U48*.

20 www.uboat.net.

21 KTB *U48*. No documentation has been found of British traps attempted in this area and the erratic behaviour was probably due to the weather.

22 In the KTB, Schultze names the ship as *Navasota*, but she had been sunk by *U47* three days earlier.

23 It seems that at this stage the Germans were somewhat uncertain how the Asdic actually worked, believing it was more of an advanced listening device than sonar. Lying still on the bottom when chased by an Asdic-equipped destroyer is not a sound tactic.

24 KTB *U48*. When *U48* entered the Fair Isle Channel on the 19th, there was no U-boat left in the Atlantic.

25 KTB *U48*.

26 KTB *U48;* KTB BdU. Schultze later admitted he had made the wrong decision.

27 There was no escort. The aircraft was on general patrol and the destroyers were far away screening *Exeter*.

28 Winsor was made an MBE and awarded Lloyd's War Medal for Bravery at Sea for his efforts.

29 Suhren and Brustat-Naval, *Ace of Aces*.

30 Suhren and Brustat-Naval, *Ace of Aces*; KTB *U48*. Of the thirty-nine men from *Den Haag*, thirteen survivors in one lifeboat were picked up by the British merchant *Glen Orchy*. The other lifeboat was lost. All twenty-seven men from *Wilja* were rescued.

31 Kapitänleutnant Schultze had one more patrol in *U48*, during the Norwegian campaign, when no ships were sunk, before he was taken ill and was relieved by Hans-Rudolf Rösing. Schultze was back for three more patrols in early 1941, bringing his total score to twenty-six ships sunk for

169,709 tons. From July 1941 to the end of the war he served in various staff and command positions. Herbert 'Vaddi' Schultze died in 1987.

Chapter 13

1 NA-ADM 199/158. During WWI, old hulls filled with concrete had been placed in the entrances to the anchorage as blockships. When the base was abandoned, fierce currents started ripping the wrecks apart and moving them out of their original positions. The so-called Scott Report of May 1939 pointed to the mediocre state of the barrages in most of the sounds and channels. It was supplemented by an analysis from Chief Salvage Officer McKenzie, working on the WWI German wrecks, of how additional blockships could effectively close the sounds to alien submarines. Part of the reason for the lack of interest in resecuring the anchorage at Scapa Flow was that many naval officers, including those in the Admiralty and Naval Staff, preferred Rosyth as a base for the Home Fleet rather than the remote and desolate Orkneys.

2 Hatston airfield was commissioned as HMS *Sparrowhawk* in October 1939.

3 Lamb, *Sky over Scapa, 1939–1945*.

4 NA-ADM 199/158; Weaver, *Nightmare at Scapa Flow*; Brown and Mehan, *Scapa Flow*.

5 Kapitänleutnant von Henning took *U18* into the anchorage through Hoxa Sound in November 1914. His boat was sighted and sunk by the minesweeper *Dorothy Gray*. In October 1918 Oberleutnant Emsmann attempted to take *UB116* in but also he was detected and destroyed by remote-controlled mines.

6 In particular, a Do18 flying boat of KüFlGr 106 at Norderney made a series of sharp, detailed photographs, which Dönitz received on 26 September.

7 BA-RM 87/2; Dönitz, *Memoirs*.

8 Dönitz, *Memoirs*; KTB *U14*.

9 Horst Wellner was killed three weeks later, when *U16*, to which he had been transferred, was sunk.

10 Prien, *Mein Weg nach Scapa Flow*.

11 The opening was made when the training ship *Niobe* sank during a summer storm in July 1932, killing seventy cadets. This led the OKM to encourage younger merchant officers to join the navy as replacements.

12 Prien had no education beyond the Seemannsschule and was unrefined in the eyes of his fellow officers, used to seeing themselves as elite. His nickname was *Bumskopf* – thickhead (probably rarely, if ever, said to his face).

13 KTB *U47*. The sinking of *Bosnia* was for a long time held by the Kriegsmarine to be the first by a U-boat in WWII, as the sinking of *Athenia* by *U30* was officially denied by German authorities.

14 Prien, *Mein Weg nach Scapa Flow*.

15 Dönitz, *Memoirs*.

16 A signal with the results of the reconnaissance was sent to *U47* but not received, as she was submerged.

17 Weaver, *Nightmare at Scapa Flow*. Due to the dispersal of the Home Fleet, the number of drifters left at Scapa Flow was reduced to five. None of them had A/S equipment. When the fleet was at Scapa Flow, two destroyers were usually detailed to keep steam for fifteen minutes, anchored in Switha and Hoy Sounds, respectively.

18 Prien, *Mein Weg nach Scapa Flow*.

19 KTB *U47*.

20 NA-ADM 199/158. The depths quoted are at 'low water ordinary springs', and thus are *minimum* water depths. The survey concluded that an additional blockship should be sunk between *Minieh* and Lamb Holm and that the gaps between *Soriano* and *Thames* and *Soriano* and shore should be closed by wires or net. This was approved, but funds were not allocated until July. The blockship intended for Kirk Sound – *Lake Neuchatel* – arrived on 15 October with a view to scuttling on the 20th.

21 KTB *U47*.

22 Weaver, *Nightmare at Scapa Flow*. The light came from a taxi taking passengers to a local dance hall.

23 KTB *U47*.

24 NA-ADM 199/158. There were only two vessels on patrol on the night of the 13th, at Hoxa and Hoy booms.

25 KTB *U47*. The notes in the KTB of *U47* are faltering, often in awkward German or single words, leaving room for interpretation as to their exact meaning.

26 As IWO, Endrass was also torpedo officer responsible for aiming the torpedoes when on surface.

27 KTB *U47*. The Revenge-class consisted of *Ramillies, Resolution, Revenge, Royal Oak* and *Royal Sovereign*, all of which were in service in 1939.

28 According to the website www.u47.org, Matrose Obergefreiter Gerd Hänsel, who is said to have been in *U47*'s conning tower at the time, heard Prien say that as *Renown* was elsewhere, the northern ship had to be the *Repulse*.

29 KTB *U47*.

30 NA-ADM 199/158; RNM-2004.7.

31 Quoted from Brown and Meehan, *Scapa Flow*

32 KTB *U47*

33 NA-ADM 199/158. Extract from the *Daily Record and Mail*, 19 October 1939.

34 RNM-2004.7.

35 NA-ADM 199/158.

36 Quoted in Brown and Meehan, *Scapa Flow*.

37 *Daisy II* was overcrowded and listing badly by the time Skipper John Gatt reluctantly decided he could do no more and set course for *Pegasus*. Gatt was later awarded a DSC for his achievements that night.

38 RNM-2004.7.

39 NA-ADM 199/158.

40 In Prien's *Mein Weg nach Scapa Flow*, the escape is made very exciting, involving depth-charges and so on, but this bears little resemblance to the KTB and is most likely not Prien's

own version.

41 KTB *U47*.

42 When asked in 1978 by historian David Lees about the positive identification of *Repulse*, Dönitz stated that the source for this had been 'the German High Command', see Weaver, *Nightmare at Scapa Flow*.

43 NA-ADM 199/158. Quotes are from *News and Journal*, 19 October 1939. The *Scotsman* had a similar account. How he could see the funnels if the ship was partly hidden was not elaborated.

44 Rumours of a German agent operating in the Orkneys for several years before the war and being taken on board *U47* when she departed the anchorage have appeared persistently since Prien took his boat through the sounds. Though there were German spies in Scotland in 1939, none has ever been documented in the Orkneys, and any such concept remains speculative and highly unlikely to this day.

45 *Hood* was lost to the guns of *Bismarck* in May while *Barham* was torpedoed by *U331* in the Mediterranean in November 1941. *Repulse* and *Prince of Wales* were lost to Japanese aircraft off Malaya in December 1941.

46 Admiral Reginald Aylmer Ranfurly Plunkett-Ernle-Erle-Drax, KCB, DSO was appointed C-in-C the Nore after the inquiry in December 1939.

47 NA-ADM 199/158.

48 The cause of the loss of *U47* is still debated. It is usually held to have been sunk by the destroyer *Wolverine* on 7 March 1941, but other sources have different scenarios, including being sunk by her own torpedoes.

49 NA-ADM 199/2063. The deep minefield was laid in early November. Poor moorings placed the mines too high, though, and they had to be swept and relaid.

Chapter 14

1 From the *U-boot Lied*, the German submariner's song: 'We are the U-boat men, the Grey Wolves of the grey seas. Before us runs pale death, the ocean belongs to us alone and ships are our prey.'

2 Kretschmer, Lüth, Topp, Liebe, Schütze, Lemann-Willenbrock, Merten, Schultze, Prien, and Lassen.

3 KTB *U23*.

4 KTB *U23;* www.uboat.net.

5 KTB *U23*.

6 Adalbert Schnee would leave *U23* after the next patrol, taking command of *U6*, *U60* and eventually *U201*, sinking twenty-three ships for 95,889 tons during twelve patrols.

7 *U23* carried only one spare torpedo on the winter missions in 1939/40.

8 *Danmark* was en route from Aruba to Denmark with petrol and kerosene, and strictly neutral. 1,924 tons of her kerosene cargo was salvaged during the summer of 1940 and subsequently the forecastle was refloated and towed away for use as a storage hulk.

9 KTB *U23*. By the time *U99* was sunk and Kretschmer taken POW, he had sunk forty-seven Allied or neutral ships for a total of 274,418 tons plus another five ships damaged, more than

any other U-boat commander.

10 Robertson, *The Golden Horseshoe*.

11 KTB BdU.

12 KTB BdU.

13 *Ardent* and *Acasta* were sent to meet Convoy HX-3.

14 IWM-65/19/1. Admiral Dunbar-Nasmith, C-in-C Plymouth, later criticised Lieutenant Commander Philip Saumarez of *Ilex* for opening fire at long range. 'It would have been better', he held, 'to close as rapidly as possible without opening fire and thus increase the chance of Asdic contact.' He was very complimentary, though, of the combined efforts of *Ilex* and *Imogen*, sinking *U42*. NA-ADM 199/130.

15 *Stonepool* had a shell hole in No. 1 hold, just above the waterline and was taking water, but the pumps coped.

16 IWM-65/19/1.

17 IWM-65/19/1.

18 NA-ADM 199/130. Master Albert White and gun layer Fredrick Hayter in particular were commended. *Stonepool* was sunk on 11 September off Greenland when convoy SC-42 was attacked by a large wolfpack.

19 *Imogen* and *Ilex*, heading for Plymouth with the survivors of *Louisiane* and *U42*, picked up those of *Lochavon* and *Bretagne* too on their way.

20 NA-ADM 199/130.

21 KTB BdU. Before this, Dönitz had held the route through the Channel to be convenient and worth the risk.

22 KTB BdU.

23 Paul Büchel was promoted to Korvettenkapitän during the sortie, effective 1 January 1940.

24 KTB BdU.

25 In August 1943, Büchel was given command of *U860*. In June 1944 on his first patrol, en route to the Far East, the boat was sunk by aircraft from the escort carrier USS *Solomons*. Büchel and nineteen of his men survived.

26 KTB BdU.

27 KTB *U33*. The war diary of *U33* for this mission consists of an account written by Korvettenkapitän (Ing) Friedrich Schilling in October 1943, after he was released from British capture.

28 *Gleaner* suffered damage from her own charges, and electrical equipment, including the Asdic, broke down.

29 KTB *U33*.

30 The main searchlight had been put out of action by the exploding depth-charges.

31 NA-ADM 199/123; KTB *U33*; Alexander, *Action Stations*; www.halcyon-class.co.uk. This was the first time that parts of the Enigma machine were recovered. Having the Enigma machine on board during missions that would take the boat inshore into shallow waters was against explicit orders issued by Dönitz in mid-September, and it is not clear if von Dresky deliberately took the

risk or overlooked the orders during departure. There is no doubt that he remembered when the orders to scuttle were given, as shown by his eagerness to get rid of the rotors.

32 IWM 90/23/1. In addition to the leaks aft, Chief Engineer Gerhard Stamer had managed to free the jammed main valve, flooding the ballast tanks before disembarking, effectively scuttling the boat.

33 NA-ADM 199/130.

34 *U55* was on her first patrol and had sunk four ships before encountering convoy OB-80G, the two Swedish ships *Foxen* and *Andalusia* and the two Norwegian *Telnes* and *Segovia*, all around 1,500 tons. The British 5,026-ton tanker *Vaclite* had been sunk in an earlier attack on the convoy during the night.

35 One of *Valmy*'s shells landed close to *Whitshed*. It is obvious from the reports of Ellison and Conder that they consider the Frenchman little more than a nuisance, more dangerous to them than to the Germans.

36 NA-ADM 199/137; NA-ADM 199/130; Jacobi, unpublished account; Franks, *Search, Find and Kill*; www.uboat.net.

37 *Exmouth* was built as a flotilla leader. In January 1940, she was assigned to the Rosyth Command.

38 It is also possible that this was actually *U22*, which, according to its KTB, almost collided with the freighter.

39 NA-ADM 1/10733; Baird, *Shipwrecks of the North of Scotland*. The policy of not picking up survivors was endorsed by the Admiralty. Stopping when U-boats were around was seen as an unacceptable risk compared to the value of the cargo and loss of vital cargo-carrying capacity.

40 It has not been possible to find evidence of such activities in the British archives, and the episode was most likely a misunderstanding by Jenisch.

41 KTB *U22*.

42 The badly mauled wreckage of the destroyer was found by divers in June 2001.

43 Baird, *Shipwrecks of the North of Scotland*; Morgan and Taylor, *U-Boat Attack Logs*.

44 A number of bodies were washed ashore at Wick and Lybster during January, eighteen of which were believed to be from *Exmouth*.

45 It came up during the inquiry that there had been problems with *Exmouth*'s Asdic, but it was not clear what the problem had been or whether it had been rectified.

46 NA-ADM 1/10733; Baird, *Shipwrecks of the North of Scotland. Cyprian Prince* was bombed and beached at Piraeus in 1941.

47 The Dutch *Burgerdijk* and *Den Haag*, the British *Sultan Star* and the Finnish *Wilja*.

48 Some French sources hold that *U54* was sunk by the destroyer *Simoun*, but this cannot be ascertained.

49 KTB BdU.

50 Hartmann, who was one of Dönitz's favourites, took *U37* on three patrols until he was awarded the Knight's Cross in May 1940 and posted ashore in Dönitz's staff. He remained in onshore jobs for the rest of the war except for a 200-day patrol in the large IXD boat *U198* in 1943.

51 Suhren and Brustat-Naval, *Ace of Aces*.

52 KTB BdU,

53 KTB SKL. Stiebler received orders from the BdU to attempt an escape if this should become possible.

54 RA-1256.3/10-970; BA-RM 98/22.

55 *Lagevorträge des Oberbefehlshabers der Kriegsmarine vor Hitler 1939–1945*.

56 Stiebler and his crew were released on 9 April when German forces captured Kristiansand. *U21* served the rest of the war as a training boat and was scrapped in February 1945. Stiebler returned to active service for a few months in late 1940 as captain of *U61* before being posted onshore. From April 1942 he was captain of *U461*, until she was sunk in the Bay of Biscay in July 1943. Stiebler survived and was rescued by British destroyers to spend the rest of the war as a POW. He died in 1991.

57 BA-RM 7/891; BA-RM 98/22; KTB SKL; KTB BdU.

Chapter 15

1 NA-ADM 199/2063.

2 Hezlet, *British and Allied Submarine Operations in World War II*.

3 *Sterlet* was later transferred from 6th Flotilla while *Spearfish* was added on completion of her refit.

4 RNSM-A1993/117; Hezlet, *British and Allied Submarine Operations in World War II*; Clayton, *Sea Wolves*. The 2nd and 6th Flotillas were briefly withdrawn to Rosyth while A/A defences were established at Dundee and Blyth.

5 The 1st Flotilla in the Mediterranean had *Osiris, Otway* and *Oswald* at Malta, while fifteen O-, P- and R-class boats were at the China and East India Stations. There being no direct threat in the Far East at the time, a number of the boats there were transferred to the Mediterranean. During mid-September, *Oberon* was commissioned with the 5th Flotilla after extensive repairs. She was simply too old, though, and quickly relegated to training.

6 NA-ADM 199/279; RNSM-A1993/117.

7 Coastal Command had been allocated 183 aircraft at the outbreak of the war, of which 135 were Ansons.

8 *Starfish* had to return home with an injured man on 3 September.

9 NA-ADM 178/194; NA-ADM 199/278; NA-ADM 199/279.

10 NA-ADM 199/278; NA-ADM 173/16115. In February, Lieutenant Commander John Forbes took over command of *Spearfish*. On 1 August, *Spearfish* was hit by a torpedo from *U34* and sunk off Aberdeen. The sole survivor was rescued by *U34* and taken to Germany.

11 NA-ADM 199/1819; KTB *U35*. Phillips fired a fifth torpedo ten minutes later, but by then *U35* was just a shadow in the fading light and this torpedo missed as well. The visible splash of the discharge was an issue with the U-class boats that was known from trials, but not properly rectified by the time of the outbreak of war.

12 Eleven German and two Italian U-boats were sunk by Allied submarines during the war. Only one U-boat was sunk by a submarine whilst submerged. In February 1945, *U864* was destroyed

by *Venturer* off Bergen.

13 The distance of 12 miles was a compromise agreed between the Admiralty and RA(S), considering the area to be covered, the number of submarines available and their safety. *Oxley* was built for the Australian Navy in 1927. In May 1930, both *Oxley* and her sister ship *Otway* were paid off into the reserve, eventually recommissioned in the Royal Navy a year later. In 1939, *Oxley* was attached to 2nd Flotilla.

14 The communication between *Triton* and *Oxley* was via Asdic through underwater Morse.

15 NA-ADM 178/194. Lieutenant Stacey could later recall only two challenges being made before the rifle grenade was fired, but Signalman Cavanaugh confirmed he made three. Everybody on the bridge confirmed the grenade exploded properly and was very visible.

16 NA-ADM 176/194.

17 NA-ADM 178/194. In addition, there was a change of personnel at the critical moment as Able Seaman Guckes came on to the bridge a minute after 09:00, taking over as port lookout – well after *Oxley* had been observed from *Triton* and at about the time when it was realised on board *Oxley* that a submarine was near.

18 NA-ADM 234/380; NA-ADM 178/194; NA-ADM 199/2063; Clayton, *Sea Wolves*. The thirty-five-year-old Lieutenant Commander Bowerman was declared free from blame by the Admiralty. Nevertheless, he was transferred to destroyers as soon as the inquiry was concluded and served as commanding officer in several during the war. The thirty-six-year-old Lieutenant Commander Steel was posted ashore a few months after the events and served as an instructor at Gosport for some time before being given command of the depot ship *Medway*.

19 NA-ADM 199/278. On 5 December, *Trident* nearly fired torpedoes at *Sunfish*, which was some 30 miles off her patrol line in the Skagerrak without taking special precautions. Tragedy was only avoided by the carefulness of *Trident*'s commander, James Gould, who wanted positive identification of a U-boat before firing.

20 Hezlet, *British and Allied Submarine Operations in World War II*.

21 RNSM-A1994/95.

22 RNSM-A1995/75.

23 RNSM-A1995/75.

24 Very-low frequency (VLF) radio signals from the Admiralty could be received in home waters while submarines were still submerged, close to surface, with the boat turned in the direction of the transmission, as the signal was relayed via the station at Rugby. Signals were usually transmitted every four hours and each submarine had its own call signal. High-frequency flotilla signals could only be received when boats were at the surface with aerial raised.

25 RNSM-A1995/75.

26 NA-ADM 199/1843.

27 NA-ADM 199/1843; NA-ADM 199/278; NA-ADM 199/2063; NA-173/16115; BA-RM 7/123. In the morning of 26 September several Do18 flying boats of 2./506 and 2./306 sighted the British surface forces, which the B-Dienst had reported to be at sea, north of Great Fisher Bank.

28 The cruisers and destroyers of Home Fleet were out searching for what they believed was *Deutschland* after the sinking of *Rawalpindi* – see Chapter 20.

29 NA-ADM 199/278.
30 NA-ADM 199/278.
31 NA-ADM 199/278.
32 Interference by the Admiralty in ongoing operations would be a major issue during the campaign in Norway; see Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.
33 Everyone, that is, but Seaman Wood, who slept through the incident in spite of being only 30 feet from the explosion. He was later known as 'Sleepy' Wood.
34 RNSM-A1988/032; NA-ADM 199/278.
35 ADM 199/288.
36 NA-ADM 199/288; King, *Adventure in Depth. Bremen* arrived in Murmansk on 6 September, escaping British pickets off Canada on the way home from New York and carrying no war material. She departed the Kola Inlet during a snowstorm on 10 December with a minimum crew and unarmed.
37 NA-ADM 199/288.
38 NA-ADM 199/288. The order 'splice the mainbrace' signifies that an extra tot of rum may be served.
39 KTB SKL.
40 NA-ADM 199/1819.
41 RNSM-A1994/95; NA-ADM 199/1819; NA-ADM 199/1925.
42 *Ursula* was transferred to the Russian Navy in May 1944. She was returned in 1950 to be scrapped. Captain George Phillips retired from the Royal Navy in 1947.
43 Persistent rumour had it that the regulation was enforced in order to ensure Horton was the only real contender for the post. By the outbreak of war in 1914, Horton was Lieutenant Commander and captain of the submarine *E9*, making a name for himself by sinking several German warships and freighters in the Heligoland Bight and the Baltic. Between the wars he transferred to surface ships and was, among other roles, captain of the battleship *Resolution*, Rear Admiral 2nd Battle Squadron and Commanderin-Chief 1st Cruiser Squadron in the Mediterranean. In 1937, Horton was given command of the Reserve Fleet, making its ships ready for war.
44 Chalmers, *Max Horton and the Western Approaches*.
45 Rayner, *Escort*.
46 NA-ADM 199/1925.
47 The Asdic had just been overhauled and the leak most probably stemmed from a faulty rubber seal.
48 There was a significant disagreement among the submarine commanders regarding the merit of attacking trawlers and other small auxiliary vessels. Instructions from RA(S) Watson were ambiguous.
49 NA-ADM 199/278. Commander Jackson filed his report on the sinking of his submarine to the Admiralty on 25 June 1945, following his release from POW camp.
50 NA-ADM 199/278; NA-ADM 199/1925. As *Undine* sank, the chief petty officer was unable to swim in the cold water. Lieutenant Harvey jumped back in and saved his life, for which he was subsequently awarded the Royal Humane Society Bronze Medal.

51 KTB *M7*. The S-Gerät was a German echo-sounder, equivalent to Asdic, but not as robust and functional.

52 NA-ADM 199/278; KTB *M7;* Hezlet, *British and Allied Submarine Operations in World War II*; www.uboat.net.

53 Roskill, *The War at Sea*, vol. 1; Hezlet, *British and Allied Submarine Operations in World War II*.

54 Clayton, *Sea Wolves*; Broome, *Convoy is to Scatter*. Many of those replaced were considered too old by Horton but later performed sterling service in staff positions or commanding smaller surface vessels.

55 Chalmers, *Max Horton and the Western Approaches*. Rumour had it that the real reason for Horton to move was that Northways was located near one of his favourite golf courses.

56 NA-ADM 199/1819. *Heddernheim*, which came from Thamshavn in Norway with 7,000 tons of pyrite, only stopped after several warning shots. It took three torpedoes to sink her after Kapitän Teichmann and his crew had taken to the boats, as the first two missed or steered foul before she was hit by the third and sank rapidly.

57 NA-ADM 199/286.

58 NA-ADM 199/286; NA-ADM 234/380; *Betænkning til Folketinget*, annexe 1.

59 ADM 199/288.

60 ADM 234/380; RM 7/11; RM 35/II-35.

61 NA-ADM 199/288; NA-ADM 234/380; NA-ADM 234/52; NA-ADM 199/1843l KTB SKL; Haarr, *The German Invasion of Norway*; Haarr, *The Battle for Norway*.

62 ADM 199/1848.

63 KTB *U4*. Not long after, *U4* was returned to training duties.

64 NA-ADM 199/1848; ADM 116/4471; BA-RM 98/4. *Thistle* sank south-west of Karmøy in some 650 feet of water. Fifty-three men died. For a detailed account of the Allied submarines during the German assault on Denmark and Norway, see Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.

Chapter 16

1 Churchill, *The Second World War*, vol. 1.

2 The 22 and 42 Squadrons, stationed at Thorney Island and Bircham Newton, were equipped with the obsolete Vildebeest torpedo aircraft and used only for patrols and convoy escort until re-equipped with Beauforts in 1940.

3 Depth-charges suitable for aircraft usage only became available during the summer of 1940.

4 NA-AIR 41/73; Roskill, *The War at Sea*, vol. 1; Goulter, *Forgotten Offensive*; Grove, *The Defeat of the Enemy Attack on Shipping*.

5 In general, the Hudson was cumbersome in aerial combat. Unless fitted with a rear gun-turret, which the early aircraft were not, they were furthermore insufficiently armed to take on their German counterparts. Some fifteen British reconnaissance aircraft were lost during 1939 while engaged on North Sea patrols, four of them Hudsons.

6 NA-AIR 41/73. In addition to flights to the North Sea patrols, some aircraft of 224 Squadron were detached to Thornaby to carry out photo-reconnaissance of Wilhelmshaven, Sylt and Heligoland.

7 The Do18 landed in the sea and the crew were picked up from their dinghy by the Dutch ship *Teddy*.

8 These were originaly assigned to Fighter Command, but transferred to Coastal Command in January 1940

9 NA-AIR 41/73; NA-AIR 8/226; Roskill, *The War at Sea*, vol. 1; Barnett, *Engage the Enemy More Closely*; Goulter, *Forgotten Offensive*; Rossiter, *Ark Royal*; Chesneau, *Aircraft Carriers of the World, 1914 to the Present*. After the German occupation of Norway and France, the patrol system was completely revised.

10 During the summer of 1939, the German air-ship *LZ130* made a series of flights along Britain's North Sea coast to investigate the significance of the towers erected along the coast. It was suspected they were radar, but this was questioned as German engineers believed them to be too simple compared to their own constructions.

11 Goulter, *Forgotten Offensive*. Sixteen Western Air Plans existed, of which an attack on Wilhelmshaven was WA7, the only one to be implemented.

12 Richards, *The Royal Airforce, 1939–1945*. For leading this first RAF Bomber Command attack of the war, Doran was awarded the DFC. Five Blenheims of 109 Squadron from Wyton failed to locate the German ships.

13 By a twist of fate the Blenheim crashing on the deck of *Emden* was piloted by Flying Officer H L Emden.

14 NA-ADM 267/126; KTB SKL; Bekker, *Angriffshöhe 4000*.

15 Raeder, *Mein Leben*, vol. 2. A Staffel in Luftwaffe terminology was the equivalent of a British flight. It usually had six to twelve aircraft. A Seekampfgeschwader would be an anti-shipping unit. Küstenfliegergruppen would mainly be trained and equipped for reconnaissance.

16 'Of all the men surrounding Hitler, Göring was the one with whom I was to have the fiercest battles,' Raeder wrote. He believed the head of the Luftwaffe to be 'fully ignorant' of the navy and its demands, and the antagonism between the two men quickly developed into a personal conflict, detrimental to both services. In particular, Göring's inclination towards pomp and luxury annoyed Raeder greatly. Raeder, *Mein Leben*, vol. 2.

17 In addition, there were two Bordflieger-units which supplied Ar196 aircraft for the battleships and cruisers and three Träger-squadrons, training to operate on board the planned carriers.

18 Thiele, *Luftwaffe Aerial Torpedo Aircraft and Operations*; Kurowski, *Seekrieg aus der Luft*. The He59 was found to be too slow for torpedo attack but suitable for mine-laying operations.

19 KTB SKL. On 21 October, no fewer than four of nine He115s from 1./406 were lost for no gain during an attack on a strongly defended east coast convoy off southern England, resulting in a ban on similar missions. On 29 November, five of seventeen Do18s on reconnaissance patrols were lost, one of which made an emergency landing in Norway, where its crew and that of another Dornier picked up offshore were interned.

20 Radio equipment for ‘blind’ bombing, the so-called *Knickebein* system, would only become operational during the second half of 1940, though the first stations were set up in 1939.

21 *Führer Conferences on Naval Affairs, 1939–1945*.

22 The first Condor flew in July 1937. A later prototype with extra fuel crossed the Atlantic from Berlin to New York during the summer of 1938. The requisitioned aircraft had been ordered from Denmark, Brazil and Japan.

23 Harlinghausen was a former naval officer who transferred to the Luftwaffe in 1933. In July 1938, flying as C-in-C of the German manned and equipped squadron AS/88 in Spain, Harlinghausen sank the British 4,798-ton *Thorpeness* with a single torpedo off Valencia. This was the first and only successful airborne torpedo attack prior to the outbreak of WWII. In 1941 Harlinghausen was appointed Fliegerführer Atlantik before being transferred to the Mediterranean. He fell out with Göring during 1943 and was sidelined. After the war he served in the West German Air Force.

24 A Geschwader is a large wing consisting of three Gruppen or squadrons and a Stab or staff – altogether around 100 aircraft. A KG or Kampfgeschwader is a bomber wing, and II/KG30 is No. II Squadron of the 30th Wing, whereas 2./KG30 is 2nd Staffel or Flight in No. I Squadron of the 30th Wing (1st, 2nd and 3rd Staffels making up No. I Squadron), and so on. Some of the early wings carried unofficial names, *Löwen* Geschwader meaning ‘Lion Wing’.

25 Bekker, *Angriffshöhe 4000;* Weal, *Ju88 Kampfgeschwader on the Western Front*.

26 ‘Eagle Wing’.

27 Matthias, *Alarm! Deutsche Flieger über England*.

28 Vice Admiral Lionel Wells, VA Aircraft Carriers, was on board *Ark Royal*.

29 Two Blackburn Skua squadrons, 800 and 803, were in service on *Ark Royal*.

30 Matthias, *Alarm! Deutsche Flieger über England*.

31 Carl Franke had been a test pilot for many years, leading the technical test programme of the Ju88 at Rechlin. In August 1939 he volunteered to follow the Ju88 into service.

32 Matthias, *Alarm! Deutsche Flieger über England*; Kohl, *Wir fliegen gegen England*. Franke gave several accounts of the events on this day in various contemporary books and magazines. This is a synopsis of the two considered most reliable. In later accounts he held that a hit had been observed on the foredeck.

33 Franke was promoted and decorated, in spite of repeated cautions from him and others that it was unlikely that the carrier had been sunk. He was later killed on the Eastern Front.

34 One of the shadowing Do18s from 2./506 was brought down by a Skua flown by Lieutenant McEwen and his air gunner PO Seymour of 803 Squadron from *Ark Royal*. The crew of four was picked up by *Somali*.

35 Roy Stevens, personal comunication, January 2012; NA-ADM 199/2063; RM 7/168; RM 7/123; Roskill, *The War at Sea*, vol. 1; Weal, *Ju88 Kampfgeschwader on the Western Front*; Bekker, *Angriffshöhe 4000*.

36 During a reconnaissance flight looking for *Hood*, a He111 of 2(F)./Aufklärungsgruppe 122 was shot down off the Whitby coast by Spitfires of 41 Squadron on 14 October in one of the earliest encounters between Luftwaffe and Fighter Command.

37 KTB SKL.

38 The destroyers were *Heidkamp, Ihn, Steinbrinck, Roeder, Galster, Riedel, Schultz, Arnim* and *Eckoldt*.

39 *Jervis* and *Jupiter* were approaching, but had been delayed by the poor weather.

40 BA-RM 7/295; KTB SKL. Two He111s and one Ju88 were lost during this operation, two of which made emergency landings in Denmark. A He59 and a Do18 reconnaissance aircraft were also lost. The latter, from Kü.Fl.Gr 2./406, made an emergency landing near Egersund in Norway where the crew was interned.

41 RNM-287/86(3).

42 NA-ADM 267/126.

43 Oberst Josef Schmid, head of Luftwaffe intelligence, had told Göring there were no fighters in northern Britain. This was what Schmid knew the C-in-C wanted to hear and – as usual – he obliged, irrespective of the information he had at hand.

44 The Forth Bridge was not attacked, although it appeared to the passengers of a train crossing at the time that they were the main target.

45 Hans Storp was the brother of Walter Storp.

46 Weal, *Ju88 Kampfgeschwader on the Western Front*.

47 Two of the dead from Pohle's aircraft, Unteroffizier Kurt Seydel and Gefreiterr August Schleicher, both still in their teens, were buried at Portobello Cemetery in Edinburgh. Thousands lined the streets of the city when the coffins, draped in the German flag, were taken to the churchyard by an escort of British airmen from 602 and 603 Squadrons. The war was still new and the consequences for the young men active in it were shocking.

48 This was HN-0, the first Scandinavian convoy, consisting of five Polish ships, one French and one Greek.

49 The forty-three-year-old commander was awarded the Empire Gallantry Medal posthumously. On 24 September 1940, this was exchanged for the George Cross, upon the inauguration of the new medal.

50 KTB SKL; *Scotsman*, 17 October 1939; Roskill, *The War at Sea*, vol. 1; Townsend, *Duel of Eagles*; Taylor, *Luftwaffe over Scotland*; Weal, *Ju88 Kampfgeschwader on the Western Front*.

51 In October 1939, the A/A defences at Scapa Flow consisted of two undermanned 4.5-inch batteries of the 226 Heavy Anti-Aircraft Battery, one south of Lyness, the other at Rysa, north of the base. In addition, on 1 October, the Skuas of 803 Squadron had flown off *Ark Royal* to take station at Hatston Air Base.

52 KTB SKL; Wakefield, *The First Pathfinders*.

53 Grove, *The Defeat of the Enemy Attack on Shipping*. In mid-April, some 100 mines were laid at Scapa Flow and the Clyde. These gave limited success, however, and they were quickly swept. Several mines fell harmlessly in shallow waters, possibly due to the inexperience and lack of training of the pilots.

54 In April and May, 603 Squadron operated out of Drem, while 72 Squadron moved south in January.

55 www.caithness.org.

56 *Pakeha* and *Waimana* were converted merchant ships filled with empty barrels for maximum buoyancy, dummy guns and wooden superstructures; they were intended to attract German bombs and torpedoes, mainly to test the efficiency of the A/A defences at bases and anchorages.

57 At this time, *Rodney, Valiant, Renown, Repulse, Cairo, Norfolk, Manchester, Galatea, Penelope, Arethusa* and *Aurora* were at anchor at Scapa Flow.

58 NA-ADM 267/126.

59 NA-ADM 199/388; NA-ADM 199/100; NA-CAB 66/6/35; Partridge, *Operation Skua*; Weal, *Ju88 Kampfgeschwader on the Western Front*. The fatality was James Isbister, the first to be killed on British soil during the war.

Chapter 17

1 When the first AMCs (*Orion, Atlantis* and *Widder*) eventually did become operational in March/April 1940, just before the Norwegian campaign, they were sent to the Indian Ocean. The eleven German AMCs in operation during WWII were generally smaller than the British ships, 4,000–9,000 tons: usually fast cargo ships with large fuel capacity and a significant operational range. During conversion, they were equipped with 15-cm (5.9-inch) guns in modernised mountings, A/A guns, torpedo tubes, mines and, if possible, one or more aircraft or small MTBs.

2 KTB SKL.

3 *Altmark* was later renamed *Uckermark*, and *Westerwald* was renamed *Nordmark*. The fourth ship, *Ermland*, became operational during 1940, and the fifth, *Franken*, in 1943. The sixth, *Havelland*, was never completed.

4 One 15-cm gun was concealed behind false walls underneath each bridge wing and a third similarly aft. The ships were not registered in the Lloyd's register, but appeared in the German *Amtliche Liste der deutschen Seeschiffe* as the *Dithmarschen-class*, belonging to the Kriegsmarine.

5 The ageing He60 was replaced by an Ar196 with increased range and better operational reliability. The pilot on board *Deutschland* had never flown the type before and had to acquaint himself with it after departure.

6 Paul Wenneker was very popular with his crew and affectionately nicknamed 'Wenny'.

7 KTB *Deutschland*.

8 KTB *Deutschland*.

9 KTB *Deutschland*.

10 KTB SKL; KTB *Deutschland*.

11 Landing the nimble Arado in heavy seas was difficult and, though repaired, it was soon damaged again.

12 NA-ADM 199/2130; KTB *Deutschland*.

13 Bergen Byrett, Sak B106/1939; KTB *Deutschland*.

14 The Kriegsmarine observed the absence of heavy British forces in the North Sea area through sigint and aerial reconnaissance, and decided to utilise the lull by exercising *Scharnhorst, Gneisenau* and *Hipper* in the Baltic.

15 Roy Stevens, personal communication, January 2012. *Uhenfels* was taken into British service as *Empire Ability* and eventually sunk on 27 June 1941 by a torpedo from *U69*, between the Canaries and Cape Verde.

16 *Ark Royal* proceeded to Portsmouth to take on supplies before sailing to Scapa Flow, where the Skuas of 800 and 803 Squadron were transferred to Hatston Naval Air Station to strengthen the defences of Scapa Flow.

17 KTB *Deutschland*.

18 RM 7/84; *Führer Conferences on Naval Affairs, 1939–1945*.

19 There were seven British submarines on patrol in the North Sea but none of them sighted *Deutschland*.

20 RM 7/180; KTB SKL; KTB *Deutschland; Führer Conferences on Naval Affairs, 1939–1945;* Prager, *Panzerschiff Deutschland, Schwerer Kreutzer Lützow*. The official reason for the name change was said to be an attempt to confuse British intelligence as to the return of the raider, reducing pressure on *Graf Spee* in the South Atlantic. The prestigious name *Deutschland* would be reserved for one of the new battleships being planned.

21 The destroyers *Jacobi, Riedel, Schoemann* and *Maass* departed Wilhelmshaven at the same time, but early next morning, off Skagen, they turned east into the Skagerrak to look for merchant ships carrying contraband.

22 Hessler, *The U-Boat War in the Atlantic, 1939–1945*.

Chapter 18

1 From the unofficial mine-sweeping hymn: ‘Sweeping, sweeping, sweeping; always bloody well sweeping …’

2 The name Oropesa originated from the trawler on which the initial experiments were carried out.

3 Drifting mines were a threat to ships in the Skagerrak, North Sea and the Channel long after the war.

4 Lund and Ludlam, *Out Sweeps!;* Grove, *The Defeat of the Enemy Attack on Shipping*; Hampshire, *Lilliput Fleet*; Brooks, *Glory Passed Them By*; www.rnps.lowestoft.org.uk.

5 Brooks, *Glory Passed Them By*. Fourteen British minesweepers were lost in 1939.

6 NA-ADM 205/7.

7 Meyer, *Hochsee-Minensuchboote 1939–1945*.

8 In June 1940, the two minesweepers *M5* and *M11* were both sunk off Norway by mines pulled towards them, against the construction of the *Bugschutzgerät*. It was correctly believed that the British had developed a new anchoring device which prevented the cutting of the anchoring line, and the use of the *Bugschutzgerät* was stopped.

9 In October 1940, a major reorganisation, reflecting the new situation with the coast from Biscay to North Cape under German control, took place, dissolving these positions.

10 *Sperrversuchskommando* literally translates as ‘Barrage Test Command’.

11 These were all leisure steamers, taking holidaymakers along the coast and onto the islands. *Königin Luise* was transferred to the Eastern Command during the winter.

12 These ships belonged to the Seedienst-Ostpreussen, maintaining the seaward connection to east Prussia.

13 The state yacht *Grille* was also temporarily drafted into the mine-layer role and deployed in the east. She was not much used, though, and soon given other tasks as convoy escort and training vessel.

14 Kutzleben, Schröder and Brennecke, *Minenschiffe 1939–1945;* Kurowski, *MS Hansestadt Danzig*. Some ships had their guns mounted after the first phase of mine-laying had been completed at the end of September.

15 German non-magnetic sea-mines in 1939 largely came in four varieties:

EMC – *Einheitsmine C* (moored contact mine). Spherical shape, 112 centimetres in diameter, charge 250 kilograms, total weight 1,150 kilograms. Usually with five horns on the upper half, two on the lower. Could be moored in 100–500 metres of water. With various anti-sweeping devices intended to explode the mine when swept but not very effective.

EMD – *Einheitsmine D* (moored contact mine). Spherical shape, 100 centimetres in diameter, charge 150 kilograms, total weight 900 kilograms. Five horns on the upper half. Could be moored in 100–200 metres of water.

UMA – *U-Boot Abwehrmine A* (anti-submarine moored contact mine). Spherical shape, 80 centimetres in diameter, charge 30 kilograms, total weight 810 kilograms. Three antennae on lower half, five on upper.

UMB – *U-Boot Abwehrmine B* (anti-submarine moored contact mine). Similar to UMA, but 40-kilogram charge.

16 *Lody* was also assigned to the mission, but during loading of the mines, an explosive charge went off, killing two men, wounding six. There was light damage to the deck and mine rails and she remained in harbour.

17 The Danish fishing vessel *Nordstrand* ventured into the Westwall only hours after the first mines had been laid, going down off Esbjerg with all four men on board. After the occupation of Denmark and Norway, the minefields were extended northwards, protecting the sea lanes between Germany and the Norwegian Leads.

18 *Hansestadt Danzig* returned to BSO on 20 September.

19 Later in the war, numerous additional minefields were laid in this area, making navigation very challenging.

20 Kutzleben, Schröder and Brennecke, *Minenschiffe 1939–1945;* Kurowski, *MS Hansestadt Danzig*.

21 *Sperrbrecher* has no direct equivalent word in English, but can somewhat loosely be translated as ‘obstacle-remover’ or ‘gate-opener’ – or more generally as ‘mine destroying vessels’.

22 Arndt, *Deutsche Sperrbrecher 1914–1945*. Over one hundred vessels were converted during the war; about half of them were lost.

23 These numbers show the importance of the destroyer laid minefields in 1939.

24 Churchill, *The Second World War*, vol. 1.

25 Lieutenant Commander George Norfolk was appointed to lead a task force of specialists reporting directly to Rear Admiral (mine-laying) William Wake-Walker, attempting to recover a

specimen of a magnetic mine.

26 Cowie, *Mines, Minelayers and Minelaying*. The early magnetic triggers were sensitive and had to be adusted to the exact minefield at the place they were to be laid. A mine adjusted for the Thames Estuary would not work properly at Scapa Flow and would have to be readjusted if laid in a different place. Later, self-adjusting triggers would be introduced.

27 KTB BdU; Paterson, *First U-Boat Flotilla*. In water depths of more than 80 feet, the force of the explosion was dispersed, making it less likely to sink the ship triggering the mine.

28 The He115 and He111 could both carry two LMA mines or one LMB.

29 A suggestion from the Luftwaffe that they wait for sufficient mines to become available for a concentrated mine-laying effort from air and sea was dismissed by the Kriegsmarine as it would have meant waiting until spring of 1940, by which time the nights would have been too short for the destroyers to get safely in and out.

30 At *Vernon*, it was found that the spokes were stabilisers, preventing it from rolling about in strong currents.

31 IWM Soundfile 9260; Lund and Ludlam, *Out Sweeps!;* Langmaid, *The Approaches are Mined!* For their bravery, Ouvry and Lewis were awarded the DSO by King George VI on 19 December while Baldwin and Vearncombe received the DSM, among the first RN decorations of the war. Lieutenant Glenny, who took care of the second mine, received the DSC. Baldwin was killed on 3 February 1940, along with over a dozen RNVR sub-lieutenants in training, while recovering a drifting British mine in the Forth.

32 From Rudyard Kipling's poem 'The Mine Sweepers': 'Awkward water to sweep./Mines reported in the fairway./Warn all traffic and detain./Send up *Unity, Claribel, Assyrian, Stormcock*, and *Golden Gain*'.

33 The material used in the generators was in demand, though, in particular the cabling, and the sweepers had orders to recover what was possible from the blown-up floats.

34 Lincoln, *Secret Naval Investigator*.

35 Lincoln, *Secret Naval Investigator*.

36 There is little doubt that *U34* laid only eight mines, so either this number of eight includes the one that sank *Caroni River*, or there was some other explosive device going up, or there was a miscount during the sweeping.

37 NA-ADM 227/290; NA-ADM 253/679; Lund and Ludlam, *Out Sweeps!* Life on board *Borde* and her consorts was never comfortable. Apart from the harrowing explosions, everything became magnetic, making metallic items stick, metal tools difficult to use, and rendering watches useless. The long-term effect on the health of the men on board appears not to have been considered.

38 With the exception of *U56*, which laid eight mines near the Cross Sand Lightvessel in late December, U-boats did not lay mines off the British east coast during the peak of the winter when ice conditions were too severe. Instead, mines were laid in the Moray Firth, Loch Ewe, the Firth of Clyde and the approaches to Liverpool, and the western entrance to the English and Bristol Channels.

39 In mid-November 1939, a long-term plan to reconstruct the WWI Northern Barrage of mines between the Orkneys and the Norwegian coast south of Bergen was put forward by Admiral Pound. The 250-mile barrage would require some 180,000 mines at a staggering cost. Nevertheless, the War Cabinet gave its approval and the assembly of 60,000 mines for the first part of the barrage was started during the winter.

40 *Adventure* was damaged by a magnetic mine in the Thames Estuary on 13 November 1939 (see Chapter 19).

41 NA-ADM 234/560. *Plover* was in operative commission on 3 September, while *Adventure* was working up, having been decommissioned in preparation for a refit. The train ferries *Hampton* and *Shepperton* were taken for conversion on 27 August and were operational within a week of the outbreak of the war. *Princess Victoria* and *Teviot Bank* followed later.

42 RNSM-A1996/108; NA-ADM 1/10084; NA-ADM 234/560; NA-ADM 199/124. The completion of the double line of indicator loops was delayed by poor weather, and eventually only one line was maintained.

43 NA-ADM 234/560.

44 Dummy minefields were also laid so that they could be reported by German aircraft and neutral ships, ensuring the areas were considered dangerous until real mines could be laid.

45 RNSM-A1996/108; NA-ADM 205/6; NA-ADM 234/560; Grove, *The Defeat of the Enemy Attack on Shipping*; Hewitt, *Coastal Convoys*. By the end of the war, the East Coast Barrage held over 35,000 mines.

46 Mack, *HMS Intrepid: A Memoir*; Smith, *Into the Minefields*.

47 Completing this mission, *Express* and *Esk* sailed to Portsmouth for refit and maintenance.

48 During periods when the moon and tides were not in the right phase for mine-laying operations, the destroyers of 20th Flotilla reverted to other duties or were sent to the yards for maintenance and repair. One such period was mid-February 1940, when *Intrepid* and *Ivanhoe* became involved in the search for *Altmark*.

49 RNSM-A1996/108; NA-ADM 234/560; Smith, *Into the Miefields*.

50 Lamb, *War in a Stringbag*. Hugh ‘Dick’ Janvrin joined the FAA as a qualified observer from the Royal Navy before the war. He flew on some of the most daring Swordfish missions, including the attack at Taranto, where he flew as observer on the lead Pathfinder aircraft. After the war, Janvrin commanded several warships, including the carrier *Victorious*. Vice Admiral Janvrin died in January 1993. There was no TAG on board the Swordfish aircraft during mine-laying operations due to the size and weight of the extra petrol tank.

51 *Illustrious* sailed for the Mediterranean in August and mine-laying continued at Rhodes, Benghazi and Tobruk.

52 Arndt, *Deutsche Sperrbrecher 1914–1945*.

53 In a speech in the House of Commons, Churchill expressed admiration of the minesweeper and trawler crews ‘eager to serve their country in a manner which they felt would be really effective’.

54 The 5th Minesweeping Flotilla consisted of *Halcyon, Harrier, Leda, Niger, Salamander, Gossamer, Skipjack, Speedwell* and *Sphinx*. Initially based at Dover, they were transferred to

Grimsby in November to secure the east coast convoy routes, and towards end of the year were moved to Rosyth.

55 NA-ADM 267/126. Some sentences have been slightly amended for readability.

56 During subsequent attacks, the guns were properly manned, working better, and the aircraft kept distance.

57 Most of the German bombs that hit the water did not explode.

58 *Lagebericht Luftwaffe*.

59 NA-ADM 1/10785.

60 The pumping overboard of 90 tons of fuel and ballast water lightened the ship as intended, but it might also have reduced the ship's stability and contributed to her capsizing in the heavy waves.

61 IWM 05/80/1; NA-ADM 1/10785. *Sphinx* was the first of the *Halcyon-class* minesweepers to be lost.

Chapter 19

1 KTB SKL.

2 Bonte was originally appointed FdT on the 24th, but two days later was appointed FdZ, while Kapitän zur See Hans Bütow became FdT.

3 NA-ADM 1/10357.

4 NA-ADM 1/10357.

5 *The War Illustrated*, 2 December 1939.

6 *The War Illustrated*, 2 December 1939.

7 NA-ADM 1/10357; NA-ADM 179/134.

8 Plevy, *Destroyer Actions*. The wreck of *Gipsy* was upright on the seabed with only the bridge visible at high tide. It blocked the channel, though, and the two halves were raised by pontoons and broken up.

9 IWM 95/5/1.

10 Bekker, *Verdammte See*.

11 Hervieux, 'German Destroyer Minelaying Operations off the English Coast'.

12 The wreckage of *Inverlane* was cut in two, the fore-part taken to South Shields for repairs and the rest used for fire-fighting practice at Lyness before eventually being sunk at Scapa Flow, between Hoy and Graemsay in Burra Sound, in May 1944.

13 Lincoln, *Secret Naval Investigator*.

14 Lincoln, *Secret Naval Investigator*. One mine was recovered intact and taken to HMS *Vernon*, the first EMC mine to be assessed by the British.

15 NA-ADM 199/288; NA-ADM 205/6; NA-ADM 199/2063; Grove, *The Defeat of the Enemy Attack on Shipping*.

16 Grove, *The Defeat of the Enemy Attack on Shipping*. *Schiff 11* was the Estonian freighter *Hanonia*, captured by *U34* and rebuilt as a minelayer.

17 Flag Officer Humber, Rear Admiral Arthur Pridham, later assessed that Lieutenant Commander McKillop's decision not to flood the magazines actually saved his ship.

18 Wilson later speculated that the ship he had sighted might have been a German of the *Brummer*-class, but lessened the consequence of the speculations, by concluding they were 'quite possibly entirely unfounded'.

19 NA-ADM 199/157; Bekker, *Verdammte See*; Hervieux, 'German Destroyer Minelaying Operations off the English Coast'. *Jersey* remained in the yards until the end of August 1940. Most of her crew was transferred to *Highlander*, which was just being completed, to avoid dispersal.

20 The twenty-two operational *Zerstörer* had been reorganised into four flotillas on 12 February.

21 Later, Jäger and his men held that at this stage they observed other wakes and shadows in the vicinity.

22 All 308 men on board were lost. Fifty-nine of the 330 men on board *Maass* were rescued, none of them an officer. Some survivors perished when *Koellner* started picking up speed too early, capsizing one rescue boat still in tow.

23 This was most likely Field No. 5, laid by *Ivanhoe* and *Intrepid* during the night of 9/10 January.

24 A second request from Naval Group West to X Fliegerkorps requesting escort for destroyers returning the next morning apparently made its Chief of Staff Major Harlinghausen curious, but by the time he realised a dangerous situation might arise, the aircraft were already taking off and he did not pursue the matter.

25 KTB SKL; Harnack, *Zerstörer unter Deutscher Flagge 1939 bis 1945;* Whitley, *German Destroyers of World War Two*; Emmerich, 'Unternehmen Wikinger'.

26 Bech, *Søkrig i Danske Farvande*. This episode is not mentioned even by a single word in *M1*'s official war diary. A secret 'special incident report' exists in the Danish National Archives, though, and is copied in Bech's book.

Chapter 20

1 NA-ADM 1/10049; NA-ADM 116/4182; Osborne, Spong and Grover, *Armed Merchant Cruisers, 1878–1945*. The minimum tonnage was reduced to 6,000 tons, and the demand for twin screws was removed. Within a few years, a shipbuilding boom ensued and most suitable newbuilds were stiffened and prepared as AMCs. Another concern was that some of the ships were sold to non-British companies, making them unavailable for requisitioning.

2 The first of the completely equipped AMCs became ready in April 1940.

3 In Britain, the conversions took place in Liverpool, Barrow-in-Furness, Belfast, Clyde, Tyne and London.

4 The decision had been taken to reduce from seventy-four to fifty-nine and then to fifty.

5 NA-ADM 205/6.

6 Later in the war, armament of the surviving AMCs was gradually improved, especially the A/A-systems.

7 NA-ADM 1/10046; NA-ADM 167/110. To circumvent international treaties specifying quarantine times prior to AMCs being deployed as well as pre-declaration of requisitions, the early British conversions were termed 'auxiliary vessels' – which indeed they were.

8 NA-ADM 1/10046; NA-ADM 1/10049; Poolman, *Armed Merchant Cruisers*; Osborne, Spong and Grover, *Armed Merchant Cruisers, 1878–1945*.

9 Butler, *Grand Strategy*, vol. 2; Osborne, Spong and Grover, *Armed Merchant Cruisers, 1878–1945*. The list included iron, copper, tin, aluminium, rubber, petroleum, phosphate, oils, fat, dairy products, coffee and tobacco, among many other things.

10 NA-FO 952/5.

11 NA-ADM 199/4182; NA-ADM 199/390; NA-ADM 199/2063. The 6-inch cruisers were also unsuited for ocean escort duties due to their limited endurance and lack of A/S capacity, and they were only used where there was limited risk of U-boats.

12 Durham, *The Fuhrer Led, but We Overtook Him*.

13 Gritten, *Full Circle*. During the search for German ships after the sinking of *Rawalpindi, Cossack* and *Afridi* lost two men each overboard in spite of lifelines securing the length of the upper decks.

14 NA-ADM 116/4182; NA-ADM 199/2063.

15 NA-ADM 199/390. The AMCs of the first batch arriving at Scapa Flow were *Asturias, Scotstoun, California, Jervis Bay, Montclare, Aurania, Salopian, Alunia* and *Ascania*. Shortly after, *Rawalpindi, Chitral, Transylvania* and *Laurentic* also arrived. By the end of November, forty-two AMCs had been fitted out and were in service or in various states of trials or working up. Twenty-two were allocated to the Northern Patrol, twelve to convoy escort, and eight to patrol and escort on overseas stations. Later, another three AMCs were allocated to the Northern Patrol.

16 NA-ADM 199/390. Some of the paragraphs have been slightly amended to improve readability.

17 Durham, *The Fuhrer Led, but We Overtook Him*.

18 The Norwegian *Mim* and *Hansi* grounded in late October–early November. Both were total losses, but no lives were lost.

19 NA-ADM 199/390; Butler, *Grand Strategy*, vol. 2. Alternative inspections by joint Norwegian-British teams in Norwegian ports were discussed between the MEW and the Norwegian Shipowners' Association but not concluded before the German invasion changed the situation.

20 Dinklage, *Die Deutsche Handelsflotte 1939–1945*. During September, around 100 ships returned home. By year-end some 575 ships were in home waters or on their way home, while about 240 were stuck in neutral harbours and 40 had been lost or were missing. KTB SKL.

21 KTB SKL. Several German ships coming from the American east coast ended up in temporary safety in Murmansk. By 18 September, eighteen German ships were waiting in northern Russia. Keeping them there for a sustained period was challenging and the SKL stopped further ships going there and ordered those that could to take to sea, following the Norwegian Leads south and crossing the Skagerrak east of Skagen.

22 *Hannah Böge* was renamed *Crown Arun* and sunk by *U99* in September 1940.

23 NA-ADM 199/390; NA-ADM 199/2063; Woodman, *The Real Cruel Sea*.

24 During the last night before arriving in Kirkwall, three German seamen got away unobserved from *Gloria* in a lifeboat. They were later landed at Methil, having been picked up by a British trawler.

25 NA-ADM 199/2063.
26 *Bertha Fisser*'s scuttling attempts were unsuccessful and, in spite of an additional half a dozen rounds of 6-inch fire from *Chitral*, she did not sink, but drifted ashore in south-east Iceland and broke in two.
27 NA-ADM 199/2063.
28 www.harry-tates.org.uk.
29 *Wahehe* was renamed *Empire Citizen* and sunk by *U107* south of Iceland in February 1941.
30 Roskill, *The War at Sea*, vol. 1. After the conclusion of the campaign in Norway in mid-1940, the German U-boats turned their attention to the Northern Patrol, and ten merchant cruisers were sunk in less than a year.
31 Raeder had found it necessary to have Marschall replace Boehm as C-in-C in October, after several serious disputes between Boehm and Group West over operational leadership of the fleet. RM 7/91.
32 NA-AIR 41/73.
33 BA-RM 7/87; KTB SKL; Barnett, *Engage the Enemy More Closely*. All times given are British times unless specified as German time (GeT), which was one hour behind.
34 Kennedy had been dismissed when the economic recession hit the Royal Navy. He was bitter about this, believing himself unfairly treated, but did not hesitate to volunteer when war was declared.
35 NA-ADM 199/362; NA-AND 199/2063. There are many versions of *Rawalpindi*'s last signals in many sources. This is according to Admiral Forbes in his official dispatch of the period August 1939 to February 1940. There is a story that the word *Deutschland* was added in transit by a guard ship at Scapa Flow, but this cannot be verified today.
36 NA-ADM 199/2063; NA-ADM 1/1152; BA-RM 7/91; Kennedy, *On my Way to the Club*. Mrs Kennedy received a letter of regret over the loss of her husband from the Board of the Admiralty, while Kennedy himself received a posthumous mention in dispatches. To many, he was an obvious candidate for a Victoria Cross.
37 NA-AIR 41/73; NA-ADM 199/2063; NA-ADM 199/278; NA-ADM 199/362. *Fortune, Fame* and *Foresight* were damaged by heavy seas; the latter two returned to the Clyde. *Repulse* and *Furious* headed into a violent storm off Halifax and had to turn back when *Repulse* was damaged.
38 BA-RM 7/87.
39 BA-RM 7/124.
40 Bekker, *Verdammte See*.
41 BA-RM 7/124.
42 Owren, *Scharnhorst Skal Senkes*.
43 KTB SKL.
44 The damage to *Nelson* was not revealed to the German intelligence for quite some time.
45 NA-ADM 1/10715.
46 Forbes transferred his flag temporarily to *Warspite* upon her arrival on 6 December. *Barham* was also transferred to the Home Fleet during December from her previous convoy escort duties. She

saw limited service, though, being torpedoed three weeks after arrival. *Rodney* was back on 31 December.

47 NA-ADM 1/10715; Roskill, *The War at Sea*, vol. 1; Beesley, *Very Special Intelligence*.

48 Churchill had for some time been under pressure from the Ministry of Shipping not to increase the number of requisitioned vessels beyond fifty, as the ministry believed that the reduction of merchant vessels would otherwise be too severe.

49 NA-ADM 116/4182. The German invasion of Norway and the fall of France would make most of these deliberations academic by the summer of 1940.

50 NA-ADM 199/390. Both *Scotstoun* and *California* grounded in December, but with limited damage.

51 NA-ADM 199/2063; NA-ADM 199/390.

Chapter 21

1 The Kalastajasaarento Peninsula is known as the Rybachy Peninsula in Russian.

2 Engle and Paananen, *The Winter War*.

3 Nevakivi, *The Appeal that Was Never Made*. During a lunch in London on 16 February, Under-Secretary of State for Foreign Affairs Richard Butler learned from Ivan Maisky, the Soviet ambassador in London, that his country had no claims in Sweden or Norway, and that Finland would not be annexed, This was naturally made known to Halifax and the Cabinet, but does not seem to have influenced the overall decision process much.

4 Mannerheim had served in the Imperial Russian Army before the Revolution and knew the Russian military and their strategies well. He had also led the White Guard, fighting for Finnish independence in 1918.

5 A puppet 'Democratic People's Government' was declared by Otto Kuusinen, a Finnish Communist living in Russia. It was only ever recognised by Moscow. For a detailed account of the events in Finland, see Engle and Paananen, *The Winter War*. For the political backdrop, see Nevakivi, *The Appeal that Was Never Made*.

6 At the start of the attack, the Finnish Air Force could muster 162 aircraft, all told. Finnish fighter pilots shot down 240 confirmed Russian bombers versus their own loss of 62. In total, Russia lost at least 684 aircraft.

7 The Soviet submarine fleet was the largest of any navy at the time and potentially a serious threat to British supply lines in the North Atlantic as well as in the Mediterranean and Black Sea and the Far East.

8 Stalin was frantic at the news from Finland and had most of the initial commanders executed.

9 Some 8,700 Swedes signed up to fight, as did 1,010 Danes, 725 Norwegians and around 1,000 British. Of these, few actually saw the front and most arrived too late or not at all.

10 Marcus Wallenberg to Halifax. Nevakivi, *The Appeal that Was Never Made*.

11 Grimnes, *Norge i Krig*, vol 1; Hjelmtveit, *Vekstår og Vargtid*; Fjørtoft, *Mot Stupet*. In February, a few hand-picked reserve officers were allowed to 'volunteer' for duty in Finland, but few of these reached the front.

12 Of these, twenty Blenheims, eleven Hurricanes and three Lysanders passed through Stavanger, Sola airfield between 18 January and 2 March. Some aircraft were lost over the North Sea, others crashed or made emergency landings.
13 http://no.wikipedia.org; Nevakivi, *The Appeal that was never made*.
14 Munthe, *Sweet is War*.
15 Fjørtoft, *Mot Stupet*. When the war ended, large amounts of Allied equipment had not reached the front. Of forty-four American F2A-1 Brewster fighter aircraft, for example, only nine had arrived when the ceasefire was signed.
16 www.fco.gov.uk.
17 Linder and Lundberg, *Ofredens Hav, Östersjön 1939–1992;* http://en.wikipedia.org.
18 *Flottans Neutralitetsvakt 1939–1945;* Bachmann, *Die Deutsche Seekriegführung in der Ostsee*.
19 Mannerheim, *Minnen*.
20 Petsamo was annexed by Russia in 1944, severing Finland's access to the Barents Sea for good.
21 Mannerheim, *Minnen*. This included 10 per cent of Finland's agricultural area and 11 per cent of its woodland.
22 Engle and Paananen, *The Winter War*.
23 Nøkleby quotes Russian sources reporting 217,500 Russian dead, Kruschev cites figures of up to a million. The number of prisoners was low on both sides.

Chapter 22

1 Lord Palmerston, who served twice as British prime minister in the mid-nineteenth century, said, 'England has no eternal friends, England has no perpetual enemies, England has only eternal and perpetual interests'.
2 *The Times* (London), 6 July 1935, in Bjerg, *Fra Neutralitet til Besættelse*.
3 Bjerg, *Fra Neutralitet til Besættelse*.
4 Bjerg, *Fra Neutralitet til Besættelse*.
5 By 8 April 1940, the ships in commission had increased to 121, of which fifty-three were auxiliaries and nine were unarmed support vessels. About two-thirds of the naval ships had been built before 1918.
6 The restricted *krigshavn* areas were defined near fortifications or major harbours such as inner Oslofjord, Kristiansand, Bergen, Trondheim and Vardø. Inside these, foreign naval ships were banned altogether, while civilian ships could enter, provided they allowed inspection and followed special instructions. Narvik was not declared *krigshavn*, though, due to the ore traffic.
7 NA-FO 371/23658; *Innstilling fra Undersøkelseskommisjonen av 1945;* Koht, *For Fred og Fridom i Krigstid 1939–1940;* Skodvin, 'Norwegian Neutrality and the Question of Credibility'.
8 NA-FO 371/23658; Koht, *For Fred og Fridom i Krigstid 1939–1940*.
9 From *Statistisk Sentralbyrå*. The merchant fleets of Britain, the USA and Japan were larger than the Norwegian, and the German fleet was just slightly smaller. The Norwegian tankers made up 18 per cent of the world's tanker fleet.

10 Similar initiatives were made towards Denmark and Sweden. Strictly speaking, the war-trade agreement was with the Allies, but France was only involved to a minor degree in the negotiations with the Scandinavians.

11 On the British side, the key negotiators were Charles Hambro, Lord Glenconner and Ralph Metcalfe.

12 BA-RM 7/11; NA-FO 371/24826; Steen, *Norges sjøkrig 1940–45*, vol. 1; Skodvin, *Norwegian Neutrality and the Question of Credibility*; Colban, *Femti år; Innstilling fra Undersøkelseskommisjonen av 1945*. To protect Norwegian neutrality, the agreement was negotiated between the British government and the Norwegian Shipowners' Association. To the Norwegian government's intense annoyance, a detailed summary of the shipping agreement was published in a French financial magazine. This was not registered in Berlin for some time, though, and only on 5 April, a few days before the invasion, was an official protest delivered via the German Embassy in Oslo to Koht.

13 NA-ADM 116/4471; Bröyn, *Den svenske malmeksport fram til besetingen av Narvik i April 1940;* Karlbom, *Sweden's Iron Ore Exports to Germany 1933–1944*. Volumetrically, some 40–50 per cent of Germany's average annual iron ore consumption in the late 1930s came from Sweden. Net figures were considerably higher, though, due to the high yield of the Swedish ore (62–66 per cent on average).

14 Lapland is a cultural province in the interior north of Sweden with numerous people of Sami descent.

15 Ore from the many smaller deposits in Bergslagen in central Sweden was exported through Oxelösund, south of Stockholm, which remained ice-free most of the winter. The capacity of both the railway network and the port at Oxelösund were insufficient to make this a viable alternative to Narvik for the Lapland ore.

16 Salewski, *Die Deutsche Seekriegsleitung*; Bröyn, *Den svenske malmeksport fram til besetingen av Narvik i April 1940;* Fritz, *German Steel and Swedish Iron Ore* and Karlbom, *Sweden's Iron Ore Exports to Germany*.

17 Churchill on this occasion claimed that the Royal Navy with American consent had laid mines in Norwegian waters as part of the North Sea Barrage. This was not correct and he would later have to excuse the inaccuracy.

18 NA-ADM 205/2.

19 In early October, Halifax told the Cabinet that there was hope that the Swedish government 'would be prepared to raise as many technical difficulties as possible with a view to restricting exports to Germany'.

20 NA-CAB 65/1; NA-CAB 66/3; NA-CAB 79/2; NA-ADM 199/1929; NA-ADM 116/4471; NA-ADM 205/2; Churchill, *The Second World War*, vol. 1; Salmon, 'Churchill, the Admiralty and the Narvik Traffic'.

21 NA-ADM 116/4471; NA-FO 371/24821; NA-MT 59/799; NA-FO 371/24821; NA-FO 371/24818; KTB SKL; KTB SKL; Dilks, 'Great Britain and Scandinavia in the "Phoney War"'; Bröyn, *Den svenske malmeksport fram til besetingen av Narvik i April 1940*.

22 NA-ADM 116/4252. The decision to keep the instructions in force was partly prompted by the sinking of *Rawalpindi*, partly because it was expected that *Altmark* might be encountered in or near Norwegian waters. Bizarrely, the issue was still being debated in the War Cabinet on 8 April, after British mines had been laid inside Norwegian territory.

23 NA-ADM 116/4471.

24 Churchill, *The Second World War*, vol. 1.

25 Raeder, *Mein Leben*, vol. 2; Barth, 'Norge og Norden i tysk strategi, 1914–1945', in Simensen, *Tyskland – Norge*. A study in mid-1939 concluded that Scandinavia, through its abundance of metals, ore, minerals, timber products and fish, was vital to Germany and should be included in the 'larger sphere of interest'.

26 BA-RM 7/180; BA-RM 7/891; BA-N 172/14; KTB SKL; *Lagevorträge des Oberbefehlshabers der Kriegsmarine vor Hitler 1939–1945;* Assmann, *The Campaign in Norway* and Raeder, *Mein Leben*, vol. 2.

27 The forty-eight-year-old Hans Pusbach had served in the Imperial Navy during WWI and had been recalled to the Kriegsmarine from the merchant navy at the outbreak of WWII. Most Norwegians who met him characterised him as a 'real sailor' and Captain Gainard spoke of him with great respect. The German prize crew, who according to Gainard 'conducted themselves in an exemplary manner', were armed with pistols, rifles and hand grenades, in addition to sufficient demolition charges to sink *Flint* should that be deemed necessary.

28 Gainard, *Yankee Skipper*. Joseph Gainard had served for twenty-six years in the US Navy and retired with the rank of lieutenant commander after injuries from a turret explosion.

29 KTB SKL; ADM 199/293; Gainard, *Yankee Skipper*. According to the British Embassy in Washington, the US government was 'furious' and protested vigorously to Moscow.

30 RA-1256.3/10-1599.

31 RA-1256.3/10-1599; NA-ADM 199/293.

32 NA-ADM 199/293. There were several British reconnaissance aircraft in the area. One of them, a London flying boat from 240 Squadron with six men on board, was lost during the search. Captain D(5) Mountbatten in *Kelly* miscalculated *City of Flint*'s speed and positioned his destroyer force too far south.

33 This was another ruse by Captain Gainard, who exaggerated the man's condition as a last resort.

34 RA-1256.3/10-1599; NA-FO 952/9. *Schwaben* had evaded the Northern Patrol on her way from South America and had left Tromsø shortly before *City of Flint*. She turned south again, having passed the instructions on.

35 RA-1256.3/10-1599; NA-ADM 199/293.

36 RA-1256.3/10-1599; RM 7/91; *Führer Conferences on Naval Affairs, 1939–1945*. Raeder made it clear to Hitler in a meeting on 10 November that Vice Consul Lanwer had acted on his own initiative and had to take full responsibility.

37 *Führer Conferences on Naval Affairs, 1939–1945*.

38 RA-1256.3/10-1599; ADM 199/293; RM 7/180; KTB SKL; Koht, *For Fred og Fridom i Krigstid 1939–1940;* Gainard, *Yankee Skipper*. Leutnant Pusbach and his men remained interned until the German invasion of Norway in April 1940. *City of Flint* was torpedoed and sunk by a

German U-boat off the Azores in January 1943. By then, Captain Gainard had been recalled to the US Navy and was serving on support ships in the Pacific. He fell ill, and died on 23 December 1943. Trygve Briseid, by then a rear admiral, was awarded a decoration from the USA in 1952 for his participation in releasing the American sailors.

39 BA-RM 7/84; KTB SKL; Steen, *Norges Sjøkrig 1940–45*. To get the ship out of Norwegian waters as fast as possible, *Westerwald* was allowed through Bergen *krigshavn* by the commanding admiral. Koht was annoyed by this and reminded him that no foreign warships should be allowed to enter the *krigshavn* zones. *Westerwald* was renamed *Nordmark* and continued in service throughout the war. In 1945, she was commissioned by the Royal Navy, transferring technology for refuelling at sea under the name *Bulawayo* until scrapped in 1955.

40 KTB BdU. Dönitz later noted that the reports of the increased traffic 'were somewhat exaggerated'.

41 BA-RM 98/89; KTB BdU.

42 The many fjords, islands, headlands and skerries of Norway present a challenge for the definition of the territorial limit that was not fully resolved in 1939. The Norwegian government drew a straight line from point to point between the outermost skerries, defining 3 miles from this baseline, cutting across the larger fjords, including Vestfjorden. This was not fully accepted by all nations at the time.

43 KTB BdU.

44 NA-GFM 33/3169. In Townsend's report to the Norwegian authorities, the position of his ship when hit was given as 67º 51.8' N, 14º 28.5' E, i.e about 2 miles further east and well inside the territorial limit by any definition. In the first signal from the Norwegian coast guard, advising all ships in the area to look out for lifeboats, the position is given as 67º 53.0' N, 14º 32.0' E. The coordinates for the torpedo fired at *Sebu* are given in *U38*'s KTB as 67º 55.0' N, 14º 28.0' E, inside the territorial limit.

45 This torpedo appears to have circled, as it exploded near the U-boat, blowing several fuses.

46 NA-GFM 33/3169; BA-RM 98/89. The position given by the pilots was 64º 35.3' N 10º 42.1' E, about half a mile inside the strictest definition of Norwegian territory; the position given in the KTB of *U38* is 64º 37.5' N, 10º 34.0' E – outside the strictest definition, but inside the general, smooth Norwegian definition. At the time of firing, *Garoufalia* was at least 1 mile east of the U-boat, i.e. further inside Norwegian territory.

47 NA-GFM 33/3169. At the Sea Court, Captain Ponticos maintained that the flag had been illuminated day and night.

48 NA-FO 371/24818; NA-GFM 33/3169. Liebe used an electrical G7e torpedo. The Norwegian Overvåkingspolitiet – Special Branch – later concluded that the departure of *Deptford* from Narvik had been reported to Germany by the Abwehr agent Müller in cooperation with Consul Wussow. There is no evidence from *U38*'s KTB that a signal to this effect was received, though, and the encounter was probably pure chance.

49 62º 15' N, 05º 08.5' E. In Norwegian terms, this would be inside the territorial boundary.

50 BA-RM 98/89. Heinrich Liebe made a total of nine war patrols with *U38*, sinking thirty-four ships for 190,937 tons. In 1941, he received the Oak Leaves and went ashore to serve with the

OKM. In 1944, he transferred to the staff of the BdU. Liebe died in July 1997 at the age of eighty-nine. *U38* became a school boat in 1941 and was scuttled in 1945.

51 NA-ADM 199/124; NA-FO 371/24819; NA-GFM 33/169.

52 NA-ADM 116/4471; Koht, *Norsk Utanrikspolitikk fram til 9.April 1940*; Koht, *For Fred og Fridom i Krigstid 1939–1940; Förspelet till det Tyska angreppet på Danmark och Norge*.

53 NA-FO 371/24820; NA-ADM 116/4471; Butler, *Grand Strategy*, vol. 2.

54 NA-FO 419/34; Colban, *Femti år; Förspelet till det Tyska angreppet på Danmark och Norge*; Koht, *For Fred og Fridom i Krigstid 1939–1940;* Skodvin, 'Norwegian Neutrality and the Question of Credibility'.

55 Laurence Collier was the head of the Northern Section of the British Foreign Office.

56 NA-FO 371/24821; NA-FO 419/34; NA-ADM 116/4471; NA-ADM 166/4471; Macleod (ed.), *Time Unguarded: The Ironside Diaries*; Koht, *For Fred og Fridom i Krigstid 1939–1940; Innstilling fra Undersøkelseskommisjonen av 1945;* Churchill, *The Second World War*, vol. 1; Auphan and Mordal, *The French Navy in World War II*; Colban, *Femti år*; Dilks (ed.), *The Diaries of Sir Alexander Cadogan*.

57 Raeder, *Mein Leben*, vol. 2; *Straffesak mot Vidkun Abraham Lauritz Jonssøn Quisling*.

58 For an account of Quisling's visit to Berlin, see Haarr, *The German Invasion of Norway*.

59 Halder, *Kriegstagebuch*.

60 BA-RM/35/I 34; KTB SKL; Jodl's diary, in Hubatsch, *Weserübung, Die deutsche Besetzung von Dänemark und Norwegen 1940;* Ottmer, *Weserübung*; Haarr, *The German Invasion of Norway*; Krancke, 'Norwegen Unternehmen'.

Chapter 23

1 These were Churchill's words when he welcomed *Exeter* home after the Battle of the River Plate.

2 Heading for the USA, *Altmark* was unarmed, the officers were officially civilian and the crew carried no uniform.

3 BA-RM 7/84; NA-ADM 188/281; Dau, *Unentdeckt über die Meere*.

4 IWM-85/50/1. Dau had been a POW during WWI and apparently felt anger towards the British for this.

5 The crew was seen to get more or less the same food as the prisoners and there was no lack of it, although most was tinned. According to Captain Dau, the rations for the prisoners were similar to those of his crew in terms of bread, rice, fruit and potatoes, but somewhat lower in meat, fat, coffee and sugar.

6 NA-MT 9/3188; NA-ADM199/281; *Scotsman*, 19 February 1940. Sub-Lieutenant Schmidt-Burchardt, who spoke good English, was one of those transferred from *Graf Spee*.

7 Due to the presence of prisoners on board, the British Admiralty issued instructions to report the ship if found and shadow her while the Admiralty decided what to do. She was not to be attacked or sunk.

8 BA-RM 102/3662; Dau, *Unentdeckt über die Meere*; Foley, *I Was an Altmark Prisoner*. A signal from the SKL had instructed Dau to use the *Reichsdienstflagge* and not disguise the ship's true identity. Vessels using this flag were unquestionably in naval service, acknowledged by the German Foreign Office.

9 BA-RM 7/1184; BA-RM 102/3662; KTB SKL. In the original signal received at the SKL, the number of British prisoners is written as 22(?) i.e. an unreadable third digit. In KTB SKL, the number of prisoners is listed as '220(?) Engländer, 67 Inder und 8 Neger'. In Captain Dau's report, the signal is quoted as '303 Britische Gefangenen'. In his report to Berlin on 18 February, Dau also uses the number 303, and at the inquest in Egersund, he stated that *Altmark* had 303 'internees'. The official British number of rescuees is 299.

10 BA-RM 12/II/167; NA-GFM 33/1519; KTB SKL.

11 BA-RM 7/1184; BA-RM 102/3662; KTB SKL; Dau, *Unentdeckt über die Meere*.

12 Foley, *I Was an Altmark Prisoner*.

13 This was a German pilot flag.

14 RA-2B 062 34 1598; Diesen, 'Altmark Saken'.

15 Foley, *I Was an Altmark Prisoner*.

16 RA-2B 062 34 1598; Diesen, 'Altmark Saken'; Dau, *Unentdeckt über die Meere*.

17 NA-ADM 1/11529.

18 NA-GEM 33/1111.

19 Diesen, 'Altmark Saken'.

20 NA-GEM 33/1111.

21 Stamsø, 'Et Kjernepunkt i Altmark-saken'; Dau, *Unentdeckt über die Meere*. The pilots from Ålesund were, to Dau's irritation, distinctly anti-German.

22 NA-ADM 199/280; NA-GEM 33/1111; Diesen, 'Altmark Saken'. Captain Dau knew from the regulations given to him by Fenrik Evju that he could not use his radio at all in Norwegian waters. The telegram was held back by order of Admiral Tank-Nielsen and never delivered to the embassy.

23 BA-RM 102/3662. In the afternoon, a 'notice for prisoners' signed by Dau was issued on board *Altmark*, reading: 'On account of today's behaviour, the prisoners will get bread and water only tomorrow instead of the regular meals. Further I have given orders that neither the prisoner-officer nor the doctor will make their regular rounds after this. Any severe case of sickness can be reported on occasion of handing down the food.'

24 Admiral Tank-Nielsen spoke fluent German, having lived in Germany.

25 BA-RM 102/3662.

26 Wiggan, *Hunt the Altmark*.

27 Stamsø, 'Et Kjernepunkt i Altmark-saken'; Diesen, 'Altmark Saken'. Stamsø believed the expression was an understatement, but the Admiral considered it 'adequate'.

28 Note by Bull, in Omang, *Altmark Saken*. Koht was on his way to Trondheim but found no reason to return.

29 Diesen, 'Altmark Saken'.

30 In all likelihood, there would have been less of a row had an interception taken place in open waters west of Bergen rather than what eventually happened in Jøssingfjord. There were no British warships in the area at the time, however, and *Altmark* would most likely have returned to the Leads unmolested.

31 Stamsø, 'Et Kjernepunkt i Altmark-saken'.

32 Report from commanding admiral to Ministry of Defence, in Omang, *Altmark Saken*.

33 BA-RM 102/3662; BA-RM 12/II/167 and BA-RM 7/1184. Berlin was informed that *Altmark* had passed Bergen in a telegram from Minister Bräuer at 13:41 on the 16th.

34 BA-RM 102/3662. Dau had been advised by the SKL to cross the Skagerrak well east of Lindesnes to avoid the British submarine patrols that were usually standing west of Lindesnes.

35 NA-ADM 223/27.

36 Churchill, The *Second World War*, vol. 1. There were several forces on patrol off the Norwegian coast in those days, looking for the *Altmark*; one group, led by the cruiser *Glasgow*, was as far north as Nordkapp.

37 NA-ADM 199/281; Churchill, *The Second World War*, vol. 1.

38 Whinney, *The U-boat Peril*.

39 NA-ADM 199/281; Vian, *Action this Day*.

40 It was later held that, when found by the aircraft, *Altmark* was flying a Norwegian flag, but this is unthinkable and must be a mistake. There is no mention of a Norwegian flag in the reports of 220 Squadron.

41 NA-ADM 1/25843 and KTB SKL. This signal was also intercepted by the German B-Dienst, who earlier in the day had located *Arethusa* and the 4th Destroyer Flotilla in the area 'near Lindesnes'.

42 *Fireren* was an old whaleboat armed with one 76-mm gun and five rifles. She could do 14 knots.

43 In February 1940, German time (GeT) and British time (BrT) were both one hour behind Norwegian time (NoT). From here on, all times given are Norwegian time – unless specified as GeT or BrT.

44 The cold grenade fragmented and bits of shrapnel can today be seen at Dalane Folkemuseum in Egersund.

45 RA-2B 062 34; NA-GEM 33/1111; BA-RM 102/3662; Mack, *HMS Intrepid: A Memoir*; Dau, *Unentdeckt über die Meere*.

46 Scott, unpublished account.

47 NA-ADM 199/281.

48 RA-II-C-11-1195/184.

49 As the man spoke Norwegian, he was presumably one of the two Norwegian pilots.

50 Wilhelm Dydland, personal communication, 22 March 2003. Wilhelm's father and most of the grown men of Jøssingfjord were away fishing for herring in the North Sea and there were mainly women and children left in the settlement.

51 NA-ADM 1/25843; BA-RM 7/1184; KTB SKL.

52 RA-1256.3/10-1765; BA-RM 12/II/167; BA-RM 102/3662; NA-ADM 1/25843; KTB SKL.

53 Steen, *Norges sjøkrig 1940–45*, vol. 1. Steen obviously had no doubts there were prisoners on board.

54 Halvorsen later confirmed that he had not asked Dau if he had prisoners on board as he 'did not wish to do so based on British sources'.

55 NA-ADM 199/281; RA-2B 062 34 1598; 'Diesen, Altmark Saken'. There was some disappointment on board *Intrepid* and *Ivanhoe* when *Cossack* arrived and they were instructed to 'make way'.

56 *Skarv*'s torpedoes could not be used due to frozen hydraulics, but Halvorsen may not have been aware of this.

57 NA-ADM 199/281; NA-ADM 1/25843.

58 The two local customs officers, Egaas and Giertsen, decided that a full inspection was not necessary and Giertsen left, while Egaas remained on board 'to keep watch'. The pilots went ashore with Giertsen around 20:00.

59 The Norwegian chain of command went from Løytnant Halvorsen of *Kjell* through Kaptein Lura of *Fireren* to Kristiansand Sea Defence Sector, from where communication was maintained with Rear Admiral Smith-Johanssen of SDD1 in Horten. Smith-Johanssen and his staff communicated with the commanding admiral in Oslo, who was responsible for the contacts with the Ministry of Defence and the Foreign Office. Kaptein Lura outranked Løytnant Halvorsen, but was a reserve officer from the merchant navy who had been called up only a few months earlier. It appears that this created some tension between the two as Halvorsen did not hide the fact that he considered his senior an amateur. There is no evidence that this influenced the following events.

60 Wilhelm Dydland, personal communication, 22 March 2003; RA-II-C-11-1195/184; Nesse, unpublished report; Lura, unpublished memoirs; Dau, *Unentdeckt über die Meere*. Wilhelm Dydland lingered near the telephone sentry and heard these changing orders being delivered verbally to Løytnant Halvorsen during the evening. A third torpedo boat, *Teist*, arrived at around 23:50.

61 *Seal* was captured by the Germans off Denmark in May 1940.

62 Scott, unpublished account. Most German ships had scuttling charges to avoid capture if intercepted.

63 NA-ADM 199/281. Vian's remark is somewhat cynical as *Seal* had laid her net inside Norwegian territory and *Baldur* was in neutral waters when intercepted. Hence, she was on innocent passage and as such an additional infringement of Norwegian neutrality.

64 At least one German U-boat was in the area off Jøssingfjord, but there is no report of any encounters.

65 NA-ADM 1/25843; Vian, *Action this Day*. The signal was copied to C-in-C Home Fleet for information. Captain Dickinson, duty officer of the War Room, held after the war that the last sentence was an addition that Halifax insisted was included before he would agree to the signal, signifying that at least he realised that what was about to happen would be a violation of Norwegian neutralty. The sentence is omitted in Churchill's account.

66 HMS *Cossack* Association, 'The Chronology of HMS *Cossack*'. Vian nevertheless recommended MacLean for a decoration afterwards.

67 NA-ADM 1/25843.

68 Løytnant Halvorsen later made a point of his observation that in the afternoon Vian had said he had orders from 'the British Admiralty', whereas he on this occasion said 'from my government'.

69 RA-2B 062 34 1598; RA-II-C-11-1195/184; NA-ADM 1/25843; NA-ADM 199/280; Nesse, unpublished report; Omang, *Altmark Saken*.

70 Orders also arrived from Kristiansand that Løytnant Halvorsen should leave *Cossack*, but too late to have any influence on the events.

71 NA-GEM 33/1111.

72 BA-RM 102/3662; NA-GFM 33/1519. The bag was later retrieved and handed over to the RNN.

73 Most of the men were marines, but it appears that some sailors from *Cossack* also jumped across.

74 NA-ADM 199/281.

75 BA-RM 102/3662; NA-GFM 33/1519.

76 NA-ADM 1/25843; NA-ADM 199/281.

77 NA-ADM 199/281.

78 One German pistol, allegedly picked up by one of the liberated prisoners, later appeared on board *Cossack*.

79 NA-GFM 33/1519; NA-ADM 199/280.

80 BA-RM 102/3662; NA-GFM 33/1519; NA-ADM 199/280; Nesse, unpublished report. The wounded was Gunner John Smith from *Arethusa*. A spent cartridge case of German make was, according to Vian, picked up near where Smith was wounded, but no details of this can be found today.

81 Egaas's statement at the Court of Inquiry, in Omang, *Altmark Saken*.

82 RA-2B 062 34 1598; 'Diesen, Altmark Saken'; Nesse, unpublished report. This was Stoker Walter Rothe.

83 Wilhelm Dydland, personal communication, 22 March 2003.

84 Some continued fleeing until they reached Hauge or Åna-Sira, more than 6 miles away.

85 BA-RM 7/1184; NA-GEM 33/1111.

86 NA-ADM 1/10830; NA-ADM 199/281; NA-ADM 1/10829. Ormsby and Burkitt were in the water for a considerable time since it was not possible to launch a boat due to the distance from *Cossack* to the hole in the ice. In fact, the Admiralty disapproved of their actions as from a naval point of view they 'might have seriously hampered Vian as to prejudice the success of the operation'. Hence, they were mentioned in dispatches but otherwise recommended to the Royal Humane Society for awards. The sailor they failed to save bore an identity disc with the inscription: 'Hans Berndsen. KMW. Kiel 28.5.16'. There are two versions of what happened to Berndsen. One is that he died in the water and was left behind, the other that he was taken on board *Cossack* and died in the sick bay to be buried at sea. Berndsen's name does not appear on the crosses of those buried at Hauge and his body is not recorded as recovered by the

Norwegians or landed in the UK. In 1942, divers working close to where *Altmark* had grounded found human remains on the seabed. It has not been possible to ascertain if these were those of Berndsen, however.

87 Winton, *The War at Sea*. According to Able Seaman Foley, Turner answered, 'Well, the navy's here. *Cossack* has come to rescue you.' Seaman Noel Bevan told the BBC the reply was 'The navy's come to take you home.'

88 The two masters were found in a double cabin aft, some 150 officers and ratings forward, all lascars forward in a separate compartment and the remainder of the ratings aft.

89 NA-ADM 199/281.

90 BA-RM 102/3662.

91 In a letter to the Norwegian Foreign Office, Dau later complained that several photographs of Hitler had been vandalised or stolen by the British sailors during the search. Other items were also missing, including Captain Dau's watch and Iron Cross. Churchill learned about this and, having investigated the allegations and finding them true, found it necessary to remind the First and Second Sea Lords that 'Anything of this kind must be stopped with the utmost strictness. No souvenir of any value can be preserved without being reported and permission obtained.' It is unclear if the looting was committed by the prisoners or the boarding party or both. NA-ADM 199/280.

92 *Arethusa* sent a preliminary signal sometime earlier, stating that *Cossack* was in Jøssingfjord alongside *Altmark*. This was intercepted by the German B-Dienst as the first indication that something was going on in Norway.

93 NA-ADM 199/281; NA-ADM 1/25843. This was not answered until 13:55.

94 BA-RM 102/3662; NA-ADM 199/281.

95 BA-RM 7/1184; BA-RM 12/II/167; NA-GFM 33/1519. At first, the telegrams were held back by the Norwegian telegraph service and at 10:15 in the morning of the 17th several telegrams were delivered to the German Embassy in one envelope, having been cleared by the Foreign Office. By then, all the signals had been intercepted by the B-Dienst in Germany.

96 NA-ADM 199/281.

97 KTB SKL.

98 Dau, who wisely kept his own anti-aircraft guns stowed away, complained that the Norwegian naval vessels did not open fire on the reconnaissance aircraft.

99 IWM-91/38/1. There are some indications that *Truant* was actually observed by at least one of the Norwegian ships in the fjord, but recognised as British and deliberately ignored.

100 Before going to the Admiral Staff, Schreiber telephoned his assumptions to Berlin, stating that some of *Altmark*'s crew had been taken by the British, and that only eighteen of the remaining men had survived her destruction. He claimed to have the information from the German vice consul in Flekkefjord and it speaks much for Schreiber's lack of common sense that he willingly forwarded such dramatic secondhand and incorrect information without verification.

101 BA-RM 102/3662; BA-RM 7/1184; BA-RM 12/II/167.

102 BA-RM 7/1184. 'die allerernsteste Situation …[die] die schärfsten Konsequenzen nach sich ziehen kann.'

103 BA-RM 7/1184; NA-GFM 33/1519; KTB SKL.

104 The seventh, Ernst Meyer, who died in the hospital, was buried on the 22nd. The eighth was still missing.

105 NA-ADM 1/25843. The bodies were later exhumed and moved to Oslo.

106 NA-FO 952/2.

107 It was difficult to find a Norwegian tug to assist *Altmark*; partly out of unwillingness to assist a German ship, partly from fear of British attacks or blacklisting. It was also difficult to find a yard willing to undertake the repairs and it was eventually agreed that she should receive basic repairs at Sandefjord.

108 Naval Attaché Schreiber suggested that the German Navy should handle the escort, but this was refused.

109 The German Embassy requested that *Altmark* should be fully repaired in Norway, but this was denied, as the Norwegian government wanted the ship out of territorial waters as soon as possible.

110 BA-RM 12/II/167; BA-RM 102/3662; NA-ADM 1/25843; NA-ADM 199/294; KTB SKL; Omang, *Altmark Saken*. Schreiber arranged for one of *Altmark*'s officers to be flown home to report, under the pretext of being ill.

111 The Royal Navy had claimed the right of a warship to pass uninspected through neutral waters since the 1870s. Only a few months earlier, the German freighter *Düsseldorf* had been taken through the Panama Canal (i.e. through US jurisdiction) by a British prize crew with the original German crew held as prisoner below deck. It was argued that as this was the 'normal necessary route for a ship from the Pacific to the Atlantic', it could not be compared with the *Altmark* as her route 'bore no relation to normal navigation'.

112 NA-FO 371/24818; NA-FO 370/2010; NA-ADM 199/280; Castberg, *Norges nøytralitet I tiden 1. september 1939–9. april 1940;* Omang, *Altmark Saken*.

113 Foreign Minister Koht had accepted an invitation to give a lecture on Norwegian foreign policy to students at the University of Trondheim on the 17th. He was just about to cancel the appointment when he was informed that *Altmark* had entered Jøssingfjord and, believing the crisis was over, Koht left Oslo by train at 21:00 on the 16th.

114 NA-ADM 199/280; Omang, *Altmark Saken*; Lie, *Leve eller dø*. Nygaardsvold spoke no English and Under-Secretary Jens Bull translated for him.

115 NA-ADM 199/280.

116 NA-ADM 1/25843; Omang, *Altmark Saken*.

117 *Stavanger Aftenblad*, 19 February 1940.

118 RA-2B 062 34 1598.

119 When *Cossack* headed towards *Altmark*, Kaptein Lura of *Fireren* considered firing a shot across the bow of the destroyer but decided against it for fear of damage to the houses around the fjord.

120 Kersaudy, *Norway 1940*.

121 Fifty-three Germans were killed, in addition to an unknown number of Japanese dock workers. The explosion also wrecked the raider *Thor*, berthed next to *Uckermark*, which sank in the harbour with thirteen dead.

Chapter 24

1 Rosenberg's diary, in *Straffesak mot Vidkun Abraham Lauritz Jonssøn Quisling*.

2 BA-RM 7/111; Raeder, *Mein Leben*, vol. 2; Kersaudy, *Norway 1940*.

3 BA-RH 24-21/17; BA-RH 24-21/23; BA-RM 35 I/32; BA-RM 7/92; BA-RM 7/11; BA-RM 7/177; KTB SKL. For an account of German progress towards Weserübung, see Haarr, *The German Invasion of Norway*.

4 NA-FO 371/24821.

5 NA-FO 371/24821; Dilks (ed.), *The Diaries of Sir Alexander Cadogan*; Kersaudy, *Norway 1940*; Butler, *Grand Strategy*, vol. 2.

6 NA-CAB 65/11; NA-FO 371/24818.

7 NA-ADM 116/4471.

8 NA-CAB 65/11; Churchill, *The Second World War*, vol. 1.

9 NA-FO 371/24818.

10 NA-FO 371/24818; NA-FO 371/24819.

11 NA-FO 371/24821.

12 NA-FO 371/24818.

13 Stavanger would only be occupied temporarily until Sola airport had been destroyed.

14 NA-WO 193/772; NA-FO 952/2; NA-WO 199/722; Butler, *Grand Strategy*, vol. 2; Macleod (ed.), *Time Unguarded: The Ironside Diaries*. For Operation Plymouth, a front line was envisaged from somewhere south of Bergen and Oslo, through the Swedish lakes to somewhere south of Stockholm.

15 Reynaud, *La France a sauvé l'Europe*; Kersaudy, *Norway 1940*.

16 Koht, *For Fred og Fridom i Krigstid 1939–1940;* Lie, *Leve eller dø*.

17 NA-ADM 116/4471; NA-WO 193/772; Butler, *Grand Strategy*, vol. 2; Skodvin, *Norge i stormakts-strategien*.

18 Admiral Edward Evans had been Scott's second-in-command on the fatal South Pole expedition and later served with distinction as a destroyer captain during WWI. His wife was Norwegian.

19 NA-WO 106/1893; Butler, *Grand Strategy*, vol. 2.

20 Butler, *Grand Strategy*, vol. 2; *Förspelet till det Tyska angreppet på Danmark och Norge*.

21 NA-CAB 65/12.

22 NA-AIR 9/446. The plan was discussed by CoS, but never realised from fear of ending up in an air battle with Swedish fighters. The Air Staff was concerned that the Germans might retrieve one of the magnetic mines.

23 KTB SKL; Halder, *Kriegstagebuch* – 'Tempo in Sachen Weserübung!'

24 BA-RM 7/11; KTB SKL.

25 These ships were known as the Tankerstaffel and Ausfuhrstaffel, respectively – Tanker and Export Echelons.

26 BA-RM 35/I 35; BA-RM 7/11; BA-RM 24-21/30; KTB SKL; Bekker, *Verdammte See*; Jodl's diary, in Hubatsch, *Weserübung, Die deutsche Besetzung von Dänemark und Norwegen 1940*. Head of Group West Generaladmiral Alfred Saalwächter was on leave and Admiral Carls had

taken his place. Saalwächter returned to his command on 6 April, at which time Carls returned to Group East in Kiel.

27 BA-RM 7/180; KTB SKL.

28 RNSM-A1995/312; BA-RM 7/844; KTB SKL. Interestingly, the position of the British submarines also indicated to the SKL that the Admiralty was aware of the exits from the safe routes through the Westwall area.

29 BA-RM 7/180; *Lagevorträge des Oberbefehlshabers der Kriegsmarine vor Hitler 1939–1945*.

30 Butler, *Grand Strategy*, vol. 2; Auphan and Mordal, *The French Navy in World War II*. The mining Luleå harbour would be undertaken later.

31 NA-WO 106/1969; NA-WO 193/773; Auphan and Mordal, *The French Navy in World War II*; Churchill, *The Second World War*, vol. 1.

32 NA-ADM 199/388.

33 NA-CAB 66/6; NA-WO 193/773. According to KTB SKL German intentions from early March were, in the case of an Allied landing in Norway to seize Denmark immediately followed by southern Norway and, if possible, to secure as much as possible of the central Swedish ore fields.

34 NA-CAB 80/105; NA-WO 193/772; NA-WO 193/773; NA-FO 371/22283; NA-FO 371/23674.

35 NA-CAB 65/12; Dilks, *The Diaries of Sir Alexander Cadogan*; Reynaud, *La France a sauvé l'Europe*.

36 Churchill, *The Second World War*, vol. 1; *Förspelet till det Tyska angreppet på Danmark och Norge*.

37 NA-ADM 199/379; Derry, *The Campaign in Norway*.

38 *Glasgow* had temporarily been detailed from 18th to 1st Cruiser Squadron.

39 Brown (ed.), *Naval Operations of the Campaign in Norway*.

Chapter 25

1 In particular French, but also British press reported repeatedly in late March of planned Allied landings in Scandinavia, and both Churchill and Reynaud were rather loose lipped about their plans.

2 Weser-day was 9 April. BA-RM 35 I/39; BA-RM 48/176; BA-RM 7/11; KTB SKL.

3 NA-ADM 199/474; NA-ADM 199/393.

4 NA-ADM 223/126; NA-ADM 199/473; NA-ADM 199/474.

5 KTB SKL; Holst, 'Surprise, Signals and Reaction'.

6 NA-ADM 234/380; BA-RM 7/11; BA-RM 35/II-35.

7 *Eckholdt* was reserve for Group II and when *Schoemann* reported engine problems she was included.

8 Realising that he would be depending on the Luftwaffe for reconnaissance and defence in Trondheim, Heye had, on his own initiative, arranged with X Fliegerkorps to include fifty men and equipment to set up an airbase.

9 BA-RM 92/5267; BA-RM 92/5078.

10 Wesermünde was renamed Bremerhaven after the war.

11 BA-RM 48/176; BA-RM 7/92; BA-RM 92/5267; BA-RM 92/5097; BA-RM 92/5223; BA-RM 35/I-39; BARM 35/II-35; BA-RM 7/11; BA-RM 54/30; KTB SKL; Busch, *Narvik*.

12 BA-RM 7/11; BA-RM 92/5178; KTB SKL. Raeder held Lütjens in high regard and when the Flottenchef Admiral Marschall went on sick leave in March 1940, he was chosen as his temporary replacement.

13 Jodl's diary, in Hubatsch, *Weserübung, die deutsche Besetzung von Dänemark und Norwegen 1940*.

14 The port cool-water pump of *Thiele* fell out and could not be repaired. Hence, the port engine could only run when the ship was moving at 15 knots or more, which gave it natural cooling. It was decided she could continue.

15 Bf110 fighters arrived over the fleet at dawn. Later, long-range He111s took over while Do18 flying boats were scouting further ahead. The ships had large swastikas painted on the deck and blue standards were flying from the top of the main mast north of 56º N to facilitate identification by own U-boats and aircraft.

16 BA-RM 92/5245. The attack was led by Wing Commander Basil Embry. All aircraft returned.

17 BA-RM 7/11; BA-RM 92/5267; BA-RM 92/5178; BA-RM 48/176; BA-RM 54/30; BA-RM 35/II-35; NA-ADM 116/447; NA-ADM 223/82; NA-AIR 41/73; NA-AIR 14/172; NA-AIR 20/6260; NA-AIR 14/3413; NA-AIR 14/666; NA-AIR 24/216; Heye, *Z13 von Kiel bis Narvik*.

18 Three weather ships were deployed prior to Operation Weserübung. *WBS3 Fritz Homann* and *WBS5 Adolf Vinnen* operated north of Iceland, while *WBS4 Hinrich Freese* was in a position off Bergen.

19 BA-RM 54/30; BA-RM 48/176; BA-RM 7/92; BA-RM 92/5178; BA-RM 92/5267l Heye, *Z 13 von Kiel bis Narvik*; Dietl and Herrmann, *General Dietl, das Leben eines Soldaten*.

20 Two of the S-boats of Kapitänleutnant Heinz Birnbacher's 1.S-Boot Flottille – S18 and S20 – collided off Heligoland and had to be towed to Sylt. Hence, only S19, S21, S22 and S24 proceeded to Bergen.

21 BA-RM 92/5257. Things did not run smoothly for Groups III and IV during 9 April in Norway, and both *Königsberg* and *Karlsruhe* would be lost, see Haarr, *The German Invasion of Norway*.

22 Eickhorn Papers and BA-RM 96/667. The ships for Denmark consisted of 2nd Minesweeper Flotilla plus the minelayers *Roland, Cobra, Preussen* and *Königin Luise*, which were to reinforce the minefields off Denmark.

23 BA-RM 7/194; BA-RM 92/5088; BA-RM 92/5087; BA-RH 24-21/30; BA-RA 57/93; BA-RM 35 I/32; KTB SKL. *Lützow* had 400 Gebirgsjägers and some 50 Luftwaffe men, originally intended for Trondheim.

24 For a list of the Weserübung forces, including Kriegsmarine, see Haarr, *The German Invasion of Norway*.

25 NA-AIR 22/8; NA-ADM 223/126; NA-ADM 223/82; NA-AIR 14/669; NA-ADM 199/393.

26 NA-FO 371/24815; NA-ADM 199/3.

27 Denham, *Inside the Nazi Ring*; Roskill, *Churchill and the Admirals*. Captain Edwards noted in his diary on 4 April that he was 'sure we ought to cancel Operation Wilfred. Winston however,

is obsessed with the idea of forcing enemy ships out of the fjords into the open waters and I fear we shall be compelled to continue.'

28 Squadron Leader Embry radioed a report just after the attack, but on an incorrect wavelength and the report was not delivered until after he landed shortly before 17:00. Ironically, the B-Dienst on board *Hipper* and *Gneisenau* both intercepted Embry's signal and forwarded it to Lütjens, who took it for granted they where being chased.

29 NA-ADM 199/2110. One British and twelve neutrals were eventually sunk or captured by the Germans.

30 *Glasgow* had temporarily been detailed from 18th to 1st Cruiser Squadron to replace the damaged *Norfolk*. Forbes was informed from Rosyth in the afternoon that the embarkation of stores and troops onto the ships of 1st Cruiser Squadron continued according to plan and the ships would be at two hours' notice from midnight.

31 NA-ADM 199/361; NA-ADM 199/393; NA-ADM 199/385; NA-ADM 199/388; NA-ADM 199/474; NA-ADM 223/126; NA-ADM 267/126; NA-ADM 199/479; NA-ADM 199/2202.

32 The trawlers *Friesland, Blankenburg* and *Nordland* were captured. Due to the worsening weather only a few British sailors managed to board the latter and *Hostile* was ordered to escort her to Kirkwall. Hence, only *Fearless* was in company with the cruiser by nightfall on 7 April.

33 For some reason, *Esk* laid only fifty-four mines, whereas the other three laid sixty each.

34 Further signals from *Syrian* were received at 08:40 and 09:51. *Syrian* guarded the minefield until news of the German invasion was heard on the radio in the morning of 9 April and Kaaveland decided to go to Bodø.

35 NA-ADM 223/126; NA-ADM 199/474; RA-II-C-11-52; RA-II-C-11-940; Willoch Papers.

36 NA-ADM 199/474. His ship *Sleipner* was described as 'toy-like with a very fine entry and light draught, mounting three 4-inch guns and two baby size torpedo tubes. All decks were bare steel and very slippery. Below, the fittings were scanty and very light; the bulkheads were thin corrugated steel, similar to French construction. From appearances, she was quite unsuitable for deep sea work, as even in the comparative shelter of the reefs, the upper deck was continuously washing down and the violent motion would have made accurate gunfire unlikely. Hoisting out the boat by derrick, manning and manoeuvring it under difficult conditions was a creditable piece of seamanship.'

37 A brief signal was sent at first after having identified the destroyers as British, followed by a second with more details. The first signal arrived at the Admiral Staff at 07:30, the second at 09:38.

38 BA-RA II-C-11-52; Ullring, unpublished diary; NA-ADM 199/474. The British destroyers stayed off Bjørnsund Lighthouse until nightfall.

39 BA-RM 35/II-35; Halder, *Kriegstagebuch*.

40 Between the events in Jøssingfjorden and early April, the British clocks had been set to summertime and British time (BrT) was one hour ahead of German time (GeT).

41 NA-ADM 199/361.

42 There is some discrepancy between the German reports and KTBs with regard to the timing of the events this morning.

43 BA-RM 92/5267; BA-RM 48/176; BA-RM 54/30.

44 NA-ADM 199/2202; NA-ADM 53/113071; NA-ADM 199/474; NA-ADM 199/323 and NA-ADM 223/126. *Glowworm*'s last signal was 'Enemy course is 090…' These signals were apparently not received directly on board *Renown*, but retransmitted from Scapa Flow, delaying them by thirty to forty minutes. They were also forwarded to the Admiralty.

45 NA-ADM 199/361.

46 Fregattenkapitän Zollendorf, the first officer, later held that the senior officer rescued from *Glowworm*, Lieutenant Ramsey, had told him the destroyer was hit near the bridge by the second salvo from *Hipper*, severing all communication from the bridge.

47 BA-RM 92/5078. British sources have *Glowworm* firing two torpedo salvoes. *Hipper*'s log report only one.

48 BA-RM 7/486; BA-RM 92/5267; BA-RM 92/5078. Heye was later criticised for having got too close to *Glowworm* and above all for having gone through the smokescreen without knowing what lurked behind.

49 Counter-flooding reduced the list to 4 degrees. Part of the double bottom was opened, leading to the loss of 253 cubic metres of fuel.

50 BA-RM 92/5267 and BA-RM 92/5078. In his report, Heye mentions a white flag on board *Glowworm*.

51 BA-RM 35/II-35; BA-RM 92/5267; BA-RM 54/30. Eight men were later transferred to hospital in Trondheim, while thirty were kept on board during the return to Wilhelmshaven. Six of the sailors from *Glowworm* rest at Stavne Churchyard outside Trondheim. The British sailors' lack of appreciation of the tactical situation and knowledge of where they were has been confirmed by several veterans. The German sailors, on the other hand, were generally well informed.

52 BA-RM 48/176.

53 BA-RM 48/176; BA-RM 35/II-35.

54 NA-ADM 199/473. *Erich Giese* also briefly sighted what was presumably *Hero*, seeking to catch up with the fleet after leaving the dummy minefield at Bud, in the morning of the 8th. She was not sighted herself, though, and Captain Smidt decided not to pursue (BA-RM 54/30).

55 BA-RM 100/125.

56 NA-ADM 199/474; NA-ADM 199/393. Admiral Forbes generally received these orders on the bridge of the *Rodney* some fifteen to forty-five minutes after they had been sent from Whitehall.

57 NA-ADM 199/474. The upper part of the port bulge started to peel away from thrusting into the heavy seas.

58 NA-AIR 20/6260; NA-AIR 22/8; NA-ADM 199/474; NA-ADM 199/361. The first signal from Hyde's Sunderland was received on board *Rodney* and given to Admiral Forbes at 14:29. The complete version was forwarded from Rosyth at 15:12. A second Sunderland from 204 Squadron was shot down by a He111 of 1(F)./122 and never sent any reports. Flight Lieutenant Harrison and his ten-man crew were lost.

59 NA-AIR 22/8. Due to the extreme weather, the two pilots (Lieutenants Bateman and Bush) were instructed to fly towards Norway. The Walrus landed near Kristiansund and later served with the Norwegian forces.

60 After giving up searching for *Glowworm, Birmingham* and *Fearless* turned north again, *Hostile* having been detached with the prize *Nordland*. At 21:00 on the 8th, Captain Madden decided to heave to due to a very heavy north-westerly sea and did not continue until 04:30 on the 9th. By the time *Renown* was eventually encountered, the fuel reserves of *Birmingham* and *Fearless* were such that they were ordered to proceed to Scapa Flow.

61 NA-ADM 199/474; NA-ADM 199/361; NA-ADM 199/2202; NA-ADM 199/393.

62 ADM 199/388. Vice Admiral Cunningham received verbal orders from C-in-C Rosyth to disembark troops at 11:30, confirmed by signal an hour later.

63 NA-ADM 234/17; NA-ADM 199/393; NA-ADM 199/379; NA-ADM 199/388.

64 A mistaken interpretation of Group V zigzagging on a northerly course towards Oslo.

65 NA-ADM 199/361; NA-ADM 199/393; NA-ADM 223/126; NA-ADM 199/388; NA-ADM 199/2202; NA-ADM 199/385.

66 NA-ADM 199/388 and Roskill, *Churchill and the Admirals*.

67 From Rosyth to Stavanger is some 350 miles or eighteen hours at 20 knots. Cunningham, receiving news of German ships at sea, warned the captains under his command to be 'prepared to disembark troops'.

68 BA-RM 92/5178; BA-RM 92/5245. All times in this chapter are British times.

69 Albert Goodey of HMS *Havock*, personal communication, 2005.

70 J Brown, in Whithouse, 'HMS *Havock*: The Story of a Destroyer'.

71 Sunrise at Narvik on 9 April 1940 was 04:25; civil twilight (sun 6 degrees below horizon) commenced at 03:23.

72 NA-ADM 199/474. The Royal Navy classified *Scharnhorst* and *Gneisenau* as 'battlecruisers'. The strong similarity of the silhouettes of the German ships rendered their identification difficult and when reported to the Admiralty as 'a *Scharnhorst*' and 'a *Hipper*' some uncertainty arose as to where the second battlecruiser was.

73 For a full account of the battle between *Renown* and *Scharnhorst* and *Gneisenau*, as well of the rest of the events taking place at sea on this day and the following two months during the campaign in Norway, see Haarr, *The German Invasion of Norway* and Haarr, *The Battle for Norway*.

Chapter 26

1 KTB SKL A March40.

2 KTB SKL A Feb40.

3 Mack, *HMS Intrepid: A Memoir*.

References

Primary Documents from Public Archives

Bergen Byarkiv, Bergen

Bergen Byrett, Sak B106/1939.

Bundesarchiv, Freiburg

BA-N 172/14, BA-RA 57/93, BA-RA II-C-11-52, BA-RH 24-21/17, BA-RH 24-21/23, BA-RH 24-21/30, BA-RM 100/125, BA-RM 102/3662, BA-RM 12/II/167, BA-RM 24-21/30, BA-RM 35 I/32, BA-RM 35 I/39, BA-RM 35/I 35, BA-RM 35/II-35, BA-RM 48/176, BA-RM 54/30, BA-RM 7/11, BA-RM 7/111, BA-RM 7/1184, BA-RM 7/123, BA-RM 7/124, BA-RM 7/168, BA-RM 7/177, BA-RM 7/180, BA-RM 7/194, BA-RM 7/295, BA-RM 7/486, BA-RM 7/84, BA-RM 7/87, BA-RM 7/891, BARM 7/91, BA-RM 7/92, BA-RM 87/1, BA-RM 87/2, BA-RM 92/5078, BA-RM 92/5087, BA-RM 92/5088, BA-RM 92/5097, BA-RM 92/5178, BA-RM 92/5223, BA-RM 92/5245, BA-RM 92/5257, BA-RM 92/5267, BA-RM 96/667, BA-RM 98/22, BA-RM 98/4, BA-RM 98/89, BA-RM/35/I 34.

The National Archives, Kew

NA-ADM 1/10046, NA-ADM 1/10049, NA-ADM 1/10084, NA-ADM 1/10357, NA-ADM 1/10667, NA-ADM 1/10715, NA-ADM 1/10733, NA-ADM 1/10785, NA-ADM 1/10829, NA-ADM 1/10830, NA-ADM 1/1152, NA-ADM 1/11529, NA-ADM 1/12141, NA-ADM 1/17659, NA-ADM 1/25843, NA-ADM 1/9501, NA-ADM 116/164, NA-ADM 116/4182, NA-ADM 116/4252, NA-ADM 116/447, NA-ADM 116/4471, NA-ADM 156/195, NA-ADM 166/4471, NA-ADM 167/110, NA-ADM 173/16115, NA-ADM 176/194, NA-ADM 178/137, NA-ADM 178/194, NA-ADM 179/134, NA-ADM 186/802, NA-ADM 188/281, NA-ADM 199/1, NA-ADM 199/100, NA-ADM 199/123, NA-ADM 199/124, NA-ADM 199/130, NA-ADM 199/137, NA-ADM 199/157, NA-ADM 199/158, NA-ADM 199/1819, NA-ADM 199/1843, NA-ADM 199/1848, NA-ADM 199/1925, NA-ADM 199/1928, NA-ADM 199/1929, NA-ADM 199/2, NA-ADM 199/2063, NA-ADM 199/2110, NA-ADM 199/2130, NA-ADM 199/2202, NA-ADM 199/278, NA-ADM 199/279, NA-ADM 199/280, NA-ADM 199/281, NA-ADM 199/286, NA-ADM 199/288, NA-ADM 199/293, NA-ADM 199/294, NA-ADM 199/3, NA-ADM 199/323, NA-ADM 199/361, NA-ADM 199/362, NA-ADM 199/376, NA-ADM 199/379, NA-ADM 199/385, NA-ADM 199/388, NA-ADM 199/388, NA-ADM 199/390, NA-ADM 199/393, NA-ADM 199/4182,

NA-ADM 199/473, NA-ADM 199/474, NA-ADM 199/479, NA-ADM 199/7, NA-ADM 205/1, NA-ADM 205/2, NA-ADM 205/4, NA-ADM 205/5, NA-ADM 205/6, NA-ADM 205/7, NA-ADM 223/126, NA-ADM 223/27, NA-ADM 223/82, NA-ADM 227/290, NA-ADM 234/17, NA-ADM 234/380, NA-ADM 234/52, NA-ADM 234/560, NA-ADM 253/679, NA-ADM 267/12, NA-ADM 267/126, NA-ADM 53/108565, NA-ADM 53/113071, NA-AIR 14/172, NA-AIR 14/3413, NA-AIR 14/666, NA-AIR 14/669, NA-AIR 15/16, NA-AIR 2/22608, NA-AIR 20/6260, NA-AIR 22/8, NA-AIR 24/216, NA-AIR 41/73, NA-AIR 8/226, NA-AIR 9/446, NA-CAB 65/1, NA-CAB 65/11, NA-CAB 65/12, NA-CAB 66/3, NA-CAB 66/6, NA-CAB 79/2, NA-CAB 80/105, NA-DM 1/10715, NA-FO 370/2010, NA-FO 371/21571, NA-FO 371/22283, NA-FO 371/23658, NA-FO 371/23658, NA-FO 371/23674, NA-FO 371/24815, NA-FO 371/24818, NA-FO 371/24819, NA-FO 371/24820, NA-FO 371/24821, NA-FO 371/24826, NA-FO 419/34, NA-FO 952/2, NA-FO 952/5, NA-FO 952/9, NA-GEM 33/1111, NA-GFM 33/1519, NA-GFM 33/3169, NA-MT 59/799, NA-MT 9/3188, NA-PREM 1/133A, NA-WO 106/1893, NA-WO 106/1969, NA-WO 193/772, NAWO 193/773, NA-WO 199/722.

Imperial War Museum, London

IWM 05/80/1, IWM 75/105/1, IWM 90/23/1, IWM 95/5/1, IWM Soundfile 9260, IWM-65/19/1, IWM-85/50/1, IWM-90/24/1, IWM-91/38/1.

Riksarkivet, Oslo

RA-1256.3/10-1599, RA-1256.3/10-1765, RA-1256.3/10-970, RA-2B 062 34 1598, RA-2B 062 34, RA-II-C-11-1195/184, RA-II-C-11-52, RA-II-C-11-940.

Royal Navy Submarine Museum, Gosport

RNM-199/40, RNM-2004.7, RNM-287/86(3), RNSM-A1995/75, RNSM-A1981/022, RNSM-A1988/ 032, RNSM-A1993/117, RNSM-A1994/95, RNSM-A1995/303, RNSM-A1995/312, RNSM-A1995/75, RNSM-A1996/108.

German War Diaries (Kriegstagebücher).

These come from several sources, Deutsches U-Boot-Archiv in Cuxhaven-Altenbruch, NARA and various books are the most important. As they often vary in quality, parts of each document have been taken from different sources.

KTB BdU, KTB FdU, KTB SKL, KTB *Deutschland*, KTB, *Scharnhorst*, KTB *Gneisenau*, KTB *Hipper*, KTB *M7*, KTB *U3*, KTB *U4*, KTB *U14*, KTB *U22*, KTB *U23*, KTB *U25*, KTB *U29*, KTB *U33*, KTB *U34*, KTB *U35*, KTB *U38*, KTB *U47*, KTB *U48*.

Unpublished Accounts and Analysis

Carson, R, unpublished account.
HMS *Cossack* Association, 'The Chronology of HMS *Cossack (LO3)*'.
Diesen, Henry, 'Altmark Saken'.
Eickhorn Papers.
Jacobi, Friedrich, unpublished account.
Lambert, A, 'Before the Battle: British Planning and Operations, September 1939–June 1940'.
Lambert, A, 'The Only British Advantage: Sea Power and Strategy, September 1939–June 1940'.
Lura, Sigurd, 'Erindringer 1977'.
Nesse, Aksel, 'Police Constable Aksel Nesse's report of 28th February 1940'.
Scott, Michael, unpublished account.
Stamsø, T, 'Et Kjernepunkt i Altmark-saken'.
Willoch Papers.
U30 File, Deutsches U-Boot-Archiv Ullring, unpublished diary.
Unger, Otto, unpublished account (*U56*).
Whithouse, J, 'HMS *Havock*: The Story of a Destroyer'.

Newspapers and Magazines:

Daily Record and Mail, 19 October 1939.
News and Journal, 19 October 1939.
Stavanger Aftenblad, 19 February 1940.
The Scotsman, 17 October 1939.
The Scotsman, 19 February 1940.
The War Illustrated, Vol 2, 2 December 1939.

Websites and Internet Sources

DiGiulian, T, 'The British High Angle Control System', www.navweaps.com/index_tech/tech-066.htm, 2009.
Emmerich, M, 'Unternehmen Wikinger', www.german-navy.de/kriegsmarine/articles/feature4.html, 2003.
Harris, C J, 'Hitler's tur til Norge i april 1934', href="http://www.arkivverket.no/arkivverket/Arkivverket/Bergen/Nettutstilling/Hitler-i-Sognefjorden">www.arkivverket.no/arkivverket/Arkivverket/Bergen/Nettutstilling/Hitler-i-Sognefjorden, 2005.
www.arkivverket.no/bergen
http://avalon.law.yale.edu

www.caithness.org
http://en.wikipedia.org
www.fco.gov.uk
http://freespace.virgin.net/john.dell
www.german-navy.de
www.halcyon-class.co.uk
www.harry-tates.org.uk
www.ibiza-hotels.com
www.naval-history.net
http://no.wikipedia.org
www.polishnavy.pl
www.rnps.lowestoft.org.uk
www.scharnhorst-class.dk
www.en.wikipedia.org
www.no.wikipedia.org
www.warsailors.com
www.wrecksite.eu
www.u-boat-archiv.de
www.u47.org
www.uboat.net

Published Books and Reports

Betænkning til Folketinget, annexe 1, Copenhagen, J H Schultz, 1945.

Documents Concerning German-Polish Relations and the Outbreak of Hostilities Between Great Britain and Germany on September 3, 1939, London, HM Stationery Office, Miscellaneous No. 9, 1939.

Flottans Neutralitesvakt 1939–1945, issued by the Swedish Navy, 1967.

Förspelet till det Tyska angreppet på Danmark och Norge, Stockholm, PA Norstedt, 1947.

Führer Conferences on Naval Affairs, 1939–1945, in *Brassey's Naval Annual*, London, William Clowes & Sons, 1948.

Innstilling fra Undersøkelseskommisjonen av 1945, Oslo, Stortinget, 1946.

Lagebericht Luftwaffe, Oberkommando der Wehrmacht, Berlin, 1940.

Lagevorträge des Oberbefehlshabers der Kriegsmarine vor Hitler 1939–1945, J E Fleischmanns Verlag, München, 1972.

The Memoirs of General the Lord Ismay, Heinemann, London 1960.

Straffesak mot Vidkun Abraham Lauritz Jonssøn Quisling, Oslo, 1946.

Alexander, A, *Action Stations*, Glasgow, Neil Wilson Publishing, 2009.

Alman, K, *U48, Das Erfolgreichste Boot der zweiten Weltkrieges*. Druffel, Leoni, 1986.

Arndt, P, *Deutsche Sperrbrecher 1914–1945*, Bonn, Bernard und Graefe Verlag, 2005.

Assmann, K, *The German Campaign in Norway*, London, HMSO, 1948.
Auphan, P and Mordal, J, *The French Navy in World War II*, Annapolis, MD, US Naval Institute, 1959.
Bachmann, H R, *Die Deutsche Seekriegführung in der Ostsee nach Ausschaltung der Polnischen Marine im Herbst 1939*, Sonderdruck Marine Rundschau, nos. 4, 5, 6, 7, 1971, Berlin, Mittler & Sohn, 1971.
—, *Der Kampf um Hela (1. September–1. Oktober 1939)*, Wehrwissenschaftliche Rundschau, no. 5, 1970.
—, *Die Polnische U-boot Division im September 1939*, Sonderdruck Marine Rundschau, no. 1, Berlin, Mittler & Sohn, 1970.
Baird, R N, *Shipwrecks of the North of Scotland*, Edinburgh, Birlinn, 2003.
Barnett, C, *Engage the Enemy More Closely*, London, Norton, 1991.
Barth, B, 'Norge og Norden i tysk strategi, 1914–1945', in Simensen, J (ed.), *Tyskland – Norge, Den lange historien*, Oslo, Tano-Aschehoug, 1999.
Bech, P, *Søkrig i Danske Farvande*, Copenhagen, Schønbergs Forlag, 2008.
Beesley, P, *Very Special Admiral*, London, Hamish Hamilton, 1980.
—, *Very Special Intelligence*, London, Chatham Publishing, 1977.
Bekker, C, *Angriffshöhe 4000*, Munich, Wilhelm Heyne Verlag, 1991.
—, *Verdammte See*, Hamburg, Gerhard Stalling Verlag, 1971.
Bjerg, H C, *Fra Neutralitet til Besættelse*, Copenhagen, Selskapet for Utg.af Kilder til Dansk Historie, 2000.
Blatt, J (ed.), *The French Defeat of 1940, Reassessments*, Oxford, Berghahn Books, 1998.
Brennecke, J, *Jäger Gejagte, Deutsche U-boote 1939–1945*, Herford, Kohlers Verlagsgesellschaft, 1956.
Brodhurst, R, *Churchill's Anchor*, Barnsley, Pen and Sword, 2000.
Broome, J, *Convoy is to Scatter*, London, William Kimber, 1972.
Brooks, E, *Glory Passed Them By*, London, Jarrolds, 1958.
Brown, D, (ed.), *Naval Operations of the Campaign in Norway*, London, Frank Cass, 2000.
Brown, D K, *Nelson to Vanguard*, Annapolis, MD, Naval Institute Press, 2000.
Brown, M and Meehan, P, *Scapa Flow*, London, Allan Lane, Penguin Press, 1968.
Bröyn, P, *Den svenske malmeksport fram til besetingen av Narvik i April 1940*, Oslo, Univ i Oslo, 1964.
Burckhardt, C J, *Meine Danziger Mission 1937–1939*, Munich, DT Verlag, 1962.
Busch, F O, *Narvik*, Gütersloh, Bertelsmann, 1940.
—, *Unsere Kriegsmarine im Polnischen Feldzug*, Berlin, Franz Schneider Verlag, 1940.
Butler, J, *Grand Strategy*, vol. 2, London, HMSO, 1970.
Castberg, F, *Norges nøytralitet I tiden 1. september 1939–9. april 1940*, Oslo, Jussens Venner, 1960.
Caulfield, M, *Tomorrow Never Came*, New York, Norton and Company, 1959.
Chalmers, W S, *Max Horton and the Western Approaches*, London, Hodder, 1954.
Chesneau, R, *Aircraft Carriers of the World, 1914 to the Present*, Leicester, Brockhampton Press, 2004.

Churchill, W S, *The Second World War*, vol. 1, London, Cassell & Co, 1949.
Clayton, T, *Sea Wolves*, London, Little, Brown, 2011.
Colban, E, *Femti år*, Oslo, Aschehoug, 1952.
Cowie, J S, *Mines, Minelayers and Minelaying*, London, Oxford University Press, 1949.
Creighton, K, *Convoy Commodore*, London, William Kimber, 1956.
Dau, H, *Unentdeckt über die Meere*, Berlin, Verlag Die Wehrmacht, 1941.
Denham, H M, *Inside the Nazi Ring*, London, John Murray, 1984.
Derry, T K, *The Campaign in Norway*, London, HMSO, 1952.
Dietl, G-L, and Herrmann, K, *General Dietl, das Leben eines Soldaten*, Vienna, Franz Hain, 1951.
Dilks, D, (ed.), *The Diaries of Sir Alexander Cadogan*, London, Cassell, 1971.
—, 'Great Britain and Scandinavia in the "Phoney War"', *Scandinavian Journal of History*, vol. 2, nos 1–2 (1977).
Dinklage, L and Witthäft, H J, *Die Deutsche Handelsflotte 1939–1945*, Hamburg, Nikol Verlag, 2001.
Dönitz, K, *Memoirs: Ten Years and Twenty Days*, London, Greenhill Books, 1959.
Durham, P, *The Führer Led, but We Overtook Him*, Durham, Pentland Press, 1996.
Elfrath, U, *Deutsche Zerstörer 1934–1945*, Friedberg, Podzun Pallas Verlag, 1961.
Engle, E and Paananen, L, *The Winter War*, Mechanicsburg, PA, Stackpole Books, 1973.
Eubank, K, *Munich*, Norman, OK, University of Oklahoma Press, 1963.
Fjørtoft, K, *Mot Stupet*, Oslo, Gyldendahl, 1989.
Foley, T, *I Was an Altmark Prisoner*, London, Francis Aldor, 1940.
Franks, N L R, *Search, Find and Kill*, Aldridge, Aston Publications, 1990.
Fritz, M, *German Steel and Swedish Iron Ore, 1939–1945*, Gothenburg, Göteborgs Universitet, 1974.
Gainard, J, *Yankee Skipper*, New York, Frederick Stokes, 1940.
Gates, E M, *End of the Affair*, Berkeley, CA, University of California Press, 1981.
Goulter, C J M, *A Forgotten Offensive*, London, Frank Cass, 1995.
Grabler, J, *Mit Bomben und MGs über Polen*, Gütersloh, Verlag C Bertelsmann, 1940.
Gray, E, *Hitler's Battleships*, Annapolis, MD, Naval Institute Press, 1999.
Grimnes, O K, *Norge i Krig*, vol. 1, Oslo, Aschehoug, 1984.
Gritten, J, *Full Circle: Log of the Navy's No. 1 Conscript*, Dunfermline, Cualann Press, 2003.
Grove, E J, *The Defeat of the Enemy Attack on Shipping, 1939–1945*, Aldershot, Naval Staff History/Ashgate, 1997.
Haarr, G H, *The Battle for Norway, April–June 1940*, London, Seaforth, 2010.
—, *The German Invasion of Norway, April 1940*, London, Seaforth, 2009.
Halder, F, *Kriegstagebuch*, Suttgart, Kohlhammer, 1962.
Hampshire, A C, *Lilliput Fleet*, London, William Kimber, 1957.
Hargreaves, R, *Blitzkrieg Unleashed: The German Invasion of Poland 1939*, Barnsley, Pen and Sword, 2008.
Harnack, W, *Zerstörer unter Deutscher Flagge 1934 bis 1945*, Herford, Koehlers Verlagegesellschaft, 1978.
Harris, C J, *Hitler i Norge*, Årbok for Sogn, Kaupanger, 2006.

Henderson, N, *Failure of a Mission, Berlin 1937–39*, London, Hodder and Stoughton, 1940.
Hervieux, P, 'German Destroyer Minelaying Operations off the English Coast (1940–41)', *Warship*, vol. 4 (1980).
Hessler, G, *The U-Boat War in the Atlantic, 1939–1945*, London, HMSO, 1989.
Hewitt, N, *Coastal Convoys, 1939–1945: The Indestructible Highway*, Barnsley, Pen and Sword, 2008.
Heye, A W, *Z 13 von Kiel bis Narvik*, Berlin, Mittler, 1942.
Hezlet, A, *British and Allied Submarine Operations in World War II*, Gosport, Royal Navy Submarine Museum, 2001.
Hinsley, H, *British Intelligence in the Second World War*, London, HMSO, 1993.
Hjelmtveit, N, *Vekstår og Vargtid*, Oslo, Aschehoug, 1969.
Högel, G, 'Kein Tag vie jeder andere', *Memeler Dampfboot*, 119/15.
—, 'Kriegsbeginn', *Memeler Dampfboot*, 119/15.
Holst, J, 'Surprise, Signals and Reaction', *Cooperation and Conflict*, vol. 1, no. 3 (1965).
Hood, R C, *Royal Republicans*, Baton Rouge, LA, Louisiana State University Press, 1985.
Hubatsch, W, *Weserübung, Die deutsche Besetzung von Dänemark und Norwegen 1940*, Göttingen, Musterschmidt, 1952.
James, W M, *The Portsmouth Letters*, London, Macmillan, 1946.
Jones, G, *Submarines versus U-Boats*, London, William Kimber, 1986.
Karlbom, R, *Sweden's iron ore exports to Germany 1933-1944*, Scandinavian Economic History Review, 13:1–2 (1965).
Kennedy, L, *On my Way to the Club*, London, Collins, 1989.
Kennedy, P M, *The Rise and Fall of British Naval Mastery*, New York, Humanity Books, 1998.
Kersaudy, F, *Norway 1940*, London, Collins, 1990.
Kerslake, S A, *Coxswain in the Northern Convoys*, London, William Kimber, 1984.
King, W D, *Adventure in Depth*, Wallop, Nautical Publishing, 1975.
Kohl, H, *Wir fliegen gegen England*, Ruttingen, Ensslin and Laiblin, 1940.
—, *For Fred og Fridom i Krigstid 1939–1940*, Oslo, Tiden, 1957.
—, *Norsk Utanrikspolitikk fram til 9.April 1940*, Oslo, Tiden, 1947.
Koop, G and Schmolke, K-P, *Pocket Battleships of the Deutschland Class*, Annapolis, MD, Naval Institute Press, 2000.
Krancke, T, 'Norwegen Unternehmen', *Atlantick Welt*, vol. 5, no. 6 (1965).
Kurowski, F, *MS Hansestadt Danzig*, Herford, Koehlers Verlagsgesellshaft, 1981.
Kurowski, F, *Seekrieg aus der Luft*, Herford, Verlag E S Mittler, 1979.
Kutzleben, K, Schröder, W and Brennecke, J, *Minenschiffe 1939–1945*, Herford, Koehlers Verlag, 1974.
Lamb, C, *War in a Stringbag*, London, Arrow Books, 1977.
Lamb, G, *Sky over Scapa, 1939–1945*, Kirkwall, Bellavista Publications, 2007.
Langmaid, K, *The Approaches are Mined!*, London, Jarrolds, 1965.
Levy, J, 'Ready or Not? The Home Fleet at the Outset of World War II', *Naval War College Review*, vol. 52, no. 4 (1999).

Lie, T, *Leve eller dø*,Oslo, Tiden, 1955.
Lincoln, F Ashe, *Secret Naval Investigator*, London, William Kimber, 1961.
Linder, J and Lundberg, L, *Ofredens Hav, Östersjön 1939–1992*, Avesta, Svenska Tryckcentralen, 2002.
Lipski, J, *Diplomat in Berlin, 1933–39*, New York, Columbia University Press, 1968.
Lund, P and Ludlam, H, *Out Sweeps!*, Slough, W Foulsham & Co, 1978.
Mack, G, *HMS Intrepid: A Memoir*, London, William Kimber, 1980.
Macleod, R (ed.), *Time Unguarded: The Ironside Diaries, 1937–1939*, London, Greenwood Press, 1974.
Mallmann Showell, J P, *German Naval Code Breakers*, Annapolis, MD, Naval Institute Press, 2003.
—, *U-Boat Commanders and Crews, 1939–1945*, Ramsbury, Crowood Press, 1998.
Mannerheim, G, *Minnen*, Stockholm, Schildts, 1952.
Matthias, J, *Alarm! Deutsche Flieger über England*, Berlin, Steiniger Verlag, 1940.
Meyer, K, *Hochsee-Minensuchboote, 1939–1945*, Hamburg, Verlag Mittler & Sohn, 2004.
Morgan, D and Taylor, B, *U-Boat Attack Logs*, Barnsley, Seaforth, 2011.
Munthe, M, *Sweet is War*, London, Duckworth, 1954.
Nevakivi, J, *The Appeal that Was Never Made*, London, C Hurst & Co, 1976.
Nolte, M, *Mit Anstand zu sterben verstehen*, Tönning, Der Andere Verlag, 2005.
Omang, R, *Altmark Saken 1940*, Oslo, Gyldendal Norske Forlag, 1953.
Osborne, R, Spong, H and Grover, T, *Armed Merchant Cruisers, 1878–1945*, Windsor, WSS, 2007.
Ottmer, H M, *Weserübung*, Munich, Oldenbourg Verlag, 1994.
Overy, R, *1939, Countdown to War*, London, Penguin Books, 2009.
Owren, N, *Scharnhorst Skal Senkes*, Oslo, Hjemmets Forlag, 1983.
Partridge, R T, *Operation Skua*, Yeovilton, Friends of the FAA Museum, 1983.
Paterson, L, *The First U-Boat Flotilla*, Barnsley, Leo Cooper, 2002.
Peszke, M A, *Poland's Navy, 1918–1945*, New York, Hippocrene Books, 1999.
Plevy, H, *Destroyer Actions*, Stroud, Spellmount, 2006.
Poolman, K, *Allied Submarines of World War Two*, London, Arms and Armour Press, 1990.
—, *Armed Merchant Cruisers*, London, Leo Cooper, 1985.
Prager, H G, *Panzerschiff Deutschland, Scwerer Kreutzer Lützow*, Munich, Wilhelm Heyne Verlag, 1981.
Prien, G, *Mein Weg nach Scapa Flow*, Berlin, Deutscher Verlag, 1940.
Raeder, E, *Mein Leben*, vols 1 and 2, Thübungen, Verlag Fritz Schlichtenmayer, 1957.
Raven, A and Roberts, J, *British Battleships of World War II*, Annapolis, MD, Naval Institute Press, 1976.
Rayner, D A; *Escort: The Battle of the Atlantic*, Annapolis, MD, Naval Institute Press, 1955.
Reynaud, P, *La France a sauvé l'Europe*, Paris, Editions Flammarion, 1947.
Richards, D, *The Royal Airforce, 1939–1945*, vol. 1, London, HMSO, 1953.
Robertson, T, *The Golden Horseshoe*, London, Pan Books, 1957.
Roskill, S W, *Churchill and the Admirals*, London, Collins, 1977.
—, *The Navy at War, 1939–1945*, London, Wadsworth, 1998.

—, *The War at Sea*, vol. 1, London, HMSO, 1954.
Rossiter, M, *Ark Royal*, London, Corgi, 2007.
Ruge, F, *Die Minensuchwaffe im Kampf gegen Polen 1939*, Berlin, Mittler & Sohn, 1941.
Salewski, *Die Deutsche Seekriegsleitung*.
Salmon, P, 'Churchill, the Admiralty and the Narvik Traffic', *Scandinavian Journal of History*, vol. 4 (1979).
—, *Scandinavia and the Great Powers, 1890–1940*, Cambridge, Cambridge University Press, 2002.
Schmidt, P, *Statist auf Diplomatischer Bühne 1923–45*, Bonn, Athenäum-Verlag, 1950.
Skodvin, M, *Norge i stormaktsstrategien*, Oslo, Universitetsforlaget, 1969.
—, 'Norwegian Neutrality and the Question of Credibility', *Scandinavian Journal of History*, vol. 2 (1977).
Skutnik, T (ed.), *Der Zweite Weltkrieg Begann auf Westerplatte*, Gdansk, Krajowa Ag. Wydawnicza, 1980.
Smedberg, M and Zetterling, N, *Utbruddet av andre verdenskrig, Hitlers angrep på Polen i 1939*, Oslo, Spartacus, 2009.
Smith, P C, *Into the Minefields: British Destroyer Minelaying, 1916–1960*, Barnsley, Pen and Sword, 2005.
Sopocko, E K S, *Orzel's Patrol: The Story of the Polish Submarine*, London, Methuen, 1942.
Steen, E A, *Norges Sjøkrig 1940–45*, vol. 1, Oslo, Gyldendal Norske Forlag, 1954.
Suhren, T and Brustat-Naval, F, *Ace of Aces, Memoirs of a U-Boat Rebel*, London, Chatham, 2006.
Taylor, L, *Luftwaffe over Scotland*, Dunbeath, Whittles Publishing, 2010.
Thiele, H, *Luftwaffe Aerial Torpedo Aircraft and Operations*, Crowborough, Hikoki Publications, 2004.
Thien, P, *1939 Gegen England*, Berlin, publisher not known, 1940.
Thomson, D, *226 Heavy Anti-Aircraft Battery, 1939–1945*, special publication, Lyness Visitor Centre.
Toghill, G, *Royal Navy Trawlers*, Part I and II, Liskeard, Maritime Books, 2003/2004.
Townsend, P, *Duel of Eagles*, London, Weidenfeld and Nicolson, 1970.
Twardowski, M, 'The Jaskolka Class Minesweepers', *Warship*, vol. 4, no. 15 (1980).
Vause, J, *Wolf: U-Boat Commanders in World War II*, Annapolis, MD, Naval Institute Press, 1997.
Vian, P, *Action this Day*, London, Muller, 1960.
Wakefield, K, *The First Pathfinders*, London, William Kimber, 1981.
Warwick, C, *Really not Required*, Durham, Pentland Press, 1997.
Weal, J, *Ju88 Kampfgeschwader on the Western Front*, London, Osprey, 2000.
—, *Junkers Ju 87 Stukageschwader 1937–41*, London, Osprey, 1997.
Weaver, H J, *Nightmare at Scapa Flow*, Oxford, Cressrelles Publishing, 1980.
Whinney, B, *The U-Boat Peril*, Poole, Blandford Press, 1986.
Whitley, M J, *German Destroyers of World War Two*, Annapolis, MD, Naval Institute Press, 1992.
Wiggan, R, *Hunt the Altmark*, London, Robert Hale, 1990.
Williamson, G, *German Pocket Battleships, 1939–45*, Oxford, Osprey Publishing. 2003.
Winton, J, *The War at Sea*, London, Arrow Books, 1970.

Woodman, R, *The Real Cruel Sea*, London, John Murray, 2004.